THE LANCET.

LECTURES

ON THE

ANATOMY, PHYSIOLOGY, AND DISEASES OF THE EYE.

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Lecture II.

Anatomy of the Eye-ball.

Gentlemen,

The human eye is very nearly spherical, and hence have arisen the expressions applied to it in English, of globe, ball, and apple of the eye, and the corresponding terms in other languages; the Germans speak of the eye-apple, in the same sense as we use eye-ball.

The essential constituents of the eye are certain transparent media to refract the rays of light; a nervous expansion to receive the impression produced by the rays thus refracted; and certain membranous opaque coverings, surrounding, connecting and protecting the foregoing parts.

The eye has been technically described as composed of *coats* and *humours*. The coats, tunics or membranes, are the membranous coverings and the nervous expansion; the humours are the transparent media, with the exception of the cornea, which belongs to the coats.

The external stratum of the globe is composed of the sclerotica and cornea; the latter being the anterior transparent part, and the former covering the rest of the eye. When these are removed, we see a membranous covering, distinguished by its deep black colour, the choroid coat, equal in extent to the sclerotica; to this is closely united, in front, the iris, which is placed at a short distance behind the cornea, and perforated near its centre by a round opening, called the pupil, for admitting the light into the interior of the eye; the removal of the choroid exposes the retina, or the nervous expansion. The three coats just enumerated, i. e. the sclerotica, choroid, and retina, are arranged one within the other, concentrically, like the layers of an onion.

The humours are three,—1st. The *vitreous*, which fills the whole concavity of the retina, and forms about four-fifths of the entire bulk of the globe; 2dly. The *crystalline*, called also crystalline lens, a nearly spherical body, imbedded in the front of the vitreous humour; 3dly. The *aqueous*, a small quantity of clear water, filling up the space between the cornea and the front of the crystalline lens.

Having thus mentioned, in a general way, the parts which make up the globe of the eye, I shall make a few observations on the structure of each, that you may be prepared to understand the morbid affections of which each is susceptible.

In dissecting and examining the globe of the eye, we observe that it does not collapse, but that it retains its figure; and this depends on its external investment or sclerotic coat. The word sclerotic, which is of Greek extraction, means hard; sclerotic coat, therefore, is the firm covering of the eye; it is, in fact, the most dense, compact, and unyielding texture of the eye. The cornea resembles it in the compactness, density, and consequent firmness of its texture, though it is perfectly transparent, while the sclerotic is entirely opaque. In the older writers the term cornea is applied to both these structures; the cornea, properly so called, being denominated cornea lucida, and the sclerotic, cornea opaca. The firmness of the sclerotic is sufficient for it to retain its figure when divided and emptied of its contents; small portions cut out of the membrane preserve their form, and regain it immediately on the pressure being removed after they have been squeezed together. When this

coat is removed, the other component parts of the globe are so much softer and more delicate in their texture that they collapse, and the eye no longer retains its characteristic figure. The sclerotic coat belongs to that description of membrane which anatomists call fibrous, such as the dura mater and periosteum. It is made up of the same kind of fibres which compose the tendons and ligaments; and these fibres are so closely compacted and interwoven, that, in the ordinary state of the part, they can scarcely be distinguished. If, however, you dissect it carefully, you will observe, in some parts, that glistening, shining aspect, which denotes a fibrous structure; while in many animals, the fibres being more loosely interwoven, are quite obvious, and in certain forms of disease, when the coat is distended and rendered thinner, the fibrous structure is very clear. This organization gives the sclerotic coat that density and compactness which fit it for covering and protecting the softer and more delicate parts of the globe; it has nothing whatever to do with vision, but is merely subservient to the purpose of supporting, connecting, and protecting the more vascular and delicate parts composing the interior of the globe. The density of structure and resistance of the sclerotic are so considerable that no force, which you can apply with the fingers or forceps will enable you to lacerate it; you will not be surprised to find, therefore, that when the vascular parts within the globe are in a state of active inflammation, this coat is so exceedingly tense and hard to the external feeling, as almost to convey the idea of the hardness of stone. The anterior part of the sclerotic is thinner than the posterior part, still this is sufficiently firm to retain its form when separated from the rest of the eye, and we cannot tear it with the fingers or forceps. The external surface of the sclerotic coat is rough and cellular, and affords attachment to the tendons of the muscles which move the eye; these tendons are fixed into it, in the same way as in other parts of the body tendons are implanted into bones. The substance of the membrane is quite white, without any appearance of red vessels; I may, perhaps, say, that in the healthy state it contains no vessels circulating red blood; it is indeed perforated by arteries and veins belonging to the interior of the globe, but I speak of vessels distributed in its substance, and in this respect it resembles other fibrous membranes which have hardly any vessels containing red blood.

The cornea differs very much in appearance from the sclerotic, but resembles it in the firmness and resistance of its structure. Thus it is fitted to protect the exposed anterior portion of the globe, while its perfect transparency allows the free passage of light into the interior of the globe. No force applied by the fingers or forceps can lacerate it, although externally it appears a very delicate kind of membrane.

The cornea and sclerotic are so firmly united, that they may, to all intents and purposes, be considered as one continued investment of the eye; as constituting a kind of case for lodging and protecting the more delicate essential structures of the organ. They may, indeed, be separated by long maceration, but in the recent subject, the resistance is as great at the line of junction as at any other part, and we may consider them as consolidated into one substance. The cornea, however, differs in point of structure from the sclerotic; for if we take it between our finger and thumb and squeeze it, we find that it is composed of layers which slide upon each other. If we make a cut into the cornea, we can turn back with the forceps several laminæ. The facility with which they are separated in such a dissection, and the freedom with which they glide over each other under pressure, shows that they are loosely connected together. The texture of the layers, when thus torn up, has a fibrous appearance; and we may probably refer the cornea to that class of structures: it agrees with them in the entire absence of vessels circulating coloured fluids, perfect transparency being essential to its office of transmitting light. Pressure on the globe (after death) renders the cornea opaque, more or less completely according to the degree of force employed; when the pressure is remitted, it again becomes transparent. In thickness it is equal to the thickest portion of the sclerotica. In resistance to the knife, it may be compared to parts of cartilaginous structure; it is so firm that we are obliged to use some force in penetrating it with the knife or needle. When you first operate on the eye, you will find much greater resistance to the entry of an instrument than the transparency of the parts would lead you to anticipate. The laminated structure, and the loose connexion of the layers, lead to another risk, namely, that of the point of the instrument passing between, instead of going completely through them. The density and compactness of the cornea, the resistance which it consequently furnishes, and its composition of several distinct laminæ, are circumstances which

you should constantly bear in mind in operating on this part.

The cornea in the human eye forms a pretty regular portion of a sphere, and is of equal thickness at the circumference and in the centre; it is consequently convex on its external or anterior surface, and concave on its posterior surface. Although it appears like a homogeneous membrane, we consider it to be made up of two, if not three different structures. The anterior surface of the cornea is a mucous membrane, being a continuation of the conjunctiva, or mucous membrane of the eye; the great bulk of the part is made up of the fibrous, or fibro-cartilaginous laminæ already described; and, with regard to the internal surface, it is a question whether this is a layer similar to the other corneal layers, or part of a peculiar membrane spread over the whole surface, which contains the aqueous humour. The existence of such a membrane, speaking of it generally, is rather inferred from analogy, than proved by any direct anatomical testimony; yet it is easy to separate from the concavity of the cornea a thin transparent layer, which differs in some points from the proper corneal laminæ. Admitting the correctness of this representation, we shall consider the cornea to consist of three different structures—the anterior, or external mucous layer, the cartilaginous laminæ in the middle, and the membrane of the aqueous humour lining the internal or posterior surface. These, and especially the two first, are most firmly united, we might say consolidated into one apparently uniform transparent structure.

The choroid coat is a thin, soft, and delicate membrane, remarkable for its black colour, and its great vascularity. Its numerous vessels are often found filled with blood after death, and the membrane acquires a deep red throughout, when they have been successfully injected with size and vermillion. The basis of the membrane is altogether vascular; microscopical examination, after a successful minute injection, presents to our view a congeries of minute vessels, an intricate vascular network, and nothing else. The black colour of the membrane arises from the deposition into its texture of a dark colouring matter, called *pigmentum nigrum*, which may be considered as adventitious, and not essential to the membrane. In this choroid coat, which is that of the bullock, you see that the black colour comes off very readily.

In order to estimate the internal structure of the choroid coat, we must examine it in its injected state. If we then survey it with the aid of magnifying powers, we find that it seems to consist entirely of blood vessels; hence it has been sometimes called the tunica vasculosa oculi.

The same observations may be made with respect to the iris, a part closely connected with the choroid, though differing very much in other points of structure. The basis or essential part of its texture is completely vascular. The best views of these parts have been furnished by Soemmerring; he has, in several figures, exhibited the minute structure of these organs with the utmost accuracy and fidelity. You will perceive at once, upon inspecting these plates, (they were handed round the theatre,) which have been taken from the work of Soemmerring, that the objects have been correctly delineated from the character of truth and nature which distinguishes them, and that diversity of texture in the different details which is evidently drawn from actual observation, and could never have been supplied by the fancy of the artist. A certain portion of the internal surface of the choroid exhibits a number of radiated folds, called the ciliary processes. I mention this now, because one of Soemmerring's engravings represents a portion of the choroid coat, with three of the ciliary processes, and a portion of the corresponding internal surface of the iris, forming a small segment of a circle. The beautiful vascular structure of the coat is represented as it appeared under a magnifying power increasing it by 24 diameters. Soemmerring mentions that the artist spent six weeks in making the drawing, and nearly put out his eyes in the process.

The colouring matter of the choroid coat is, as I have already mentioned, an adventitious substance, deposited in the texture of the membrane. If allowed to remain some time in water it is easily disengaged from the membrane, it comes off on the hand or linen, and diffuses itself through the water like Indian ink. Longer maceration discharges it entirely, leaving the texture of the choroid entire, but altered to a greyish colour. This colouring substance is called pigmentum nigrum, a name which is appropriate enough when applied to the eye of the sheep, bullock, and many other animals, which have it of the deepest jet black; but, in the human eye, the tint of this substance is by no means black, but a dark brown, of a deeper shade in some eyes than in others. In very fair individuals, the choroid coat is of a light brown colour. In the human subject, therefore, the colouring matter cannot properly be called

vigmentum nigrum, and it is more appropriately termed by foreign anatomists pigmentum fuscum. The whole internal surface of the human choroid is of the same colour as the external surface; but in the bullock, and most quadrupeds, a pertain portion of the internal surface cossesses those peculiarly bright and pivid tints of which you here see an example. In the cat it is a bright yellow, in the stag a very beautiful blue, in the sheep a greenish blue. This coloured portion of the choroid coat is called the tapetum or carpet; there is no part corresponding to it in the human eye. You will sometimes meet with the term tunica Ruyschiana. If you examine the choroid coat of an animal in the situation of the tapetum, you will find that it is partially separated into two layers. Ruysch who devoted himself to minute inquries into the structure of the human body, thought he could demonstrate a similar separation of layers in the human eye. It cannot, however, be very satisfactorily exhibited in man; we therefore describe the choroid as a single membrane. The tunica Ruyschiana is the supposed separate internal layer.

The ciliary processes are a series of parallel longitudinal folds, arranged in a radiated manner, and occupying the internal surface of the choroid at its anterior termination; they are a part of the membrane, organized like the rest, consisting of a vascular basis, with the dark pigment deposited in its interstices, and have nothing peculiar except their form and arrangement.

The iris, which fills up the space left by the anterior termination of the choroid coat, is a part of considerable importance from its situation and its office of regulating the quantity of light admitted into the eye, its diseases, and its connexion with most of the important operations performed on the organ; while an equal degree of interest attaches to it physiognomically, from its brilliance, its various tints, and the animation it imparts to the countenance. Its external appearance must be familiar to every one who has looked at the human face; it is the part in which the colour of the eye, popularly speaking, resides; the brilliantly coloured portion of the organ situated behind the cornea and close in front of the crystalline lens, in the midst of the aqueous humour, in which humour it freely moves. The opening in the centre, which is circular in the human eye, when in a healthy and natural state, is the pupil. In the sheep and bullock it is oblong, and its figure varies in different animals. The term iris, properly speaking, is applied to the anterior surface of the membrane, to that part which is distinguished by the brilliancy of its colour, from which attribute, together with the variety of its tints in different individuals, the name seems to have been derived. The colour of the iris varies very much in different persons, but in all it is distinguished by a greater or less degree of brilliancy. This characteristic belongs only to the anterior surface, for the posterior is coloured by the pigmentum nigrum, indeed by a very thick and dark stratum of it, and therefore rebles the surface of the choroid, being black in animals and dark brown in the human species. This posterior surface is called the uvea.

In this part, then, we distinguish two flat surfaces, an anterior, or iris, and a posterior, or uvea; and two margins, the *ciliary*, attached to the ciliary body, and corresponding to the circumference of the cornea, and the *pupillary*, or the border of its central opening. The situation of this opening, however, is not exactly central, it deviates a little towards the inside, so that the iris is narrower on the nasal than on the temporal side of the pupil. This difference, which was, I believe, first noticed by Soemmerring, is immediately recognisable in the living eye. The ciliary margin is the only fixed part of the iris, all the rest is loose and unconnected, floating in or washed by the aqueous humour. The very edge of the pupil, which is thin and sharply defined, is coloured by the pigment; we might say, the pupillary margin is formed by the uvea, rather than the iris. The diameter of the pupil varies in an inverse ratio to the quantity of light to which the eye is exposed; in a strong light it is contracted, and the iris proportionably expanded; when the light is diminished in quantity, the opening is enlarged, and the iris, in a corresponding degree, contracted.

The colour of the iris varies almost in every individual, and in this respect there is a marked difference between the human species and animals. It may be said of all animals, in their natural or wild state, that the colour of the iris is constant in the same species. Domesticated animals, with greater diversities in the general colour of the body, have, in some degree, a corresponding diversity in that of the iris; but in no instance are there such numerous differences as in the human subject. The colour of the iris generally corresponds to that of the external surface; it varies according to the complexion of the individual and the colour of the hair. In those of fair complexion and light-coloured hair, the iris is either blue or grey, or of some light tint; it is

what we call a light-coloured eye. In persons of dark complexion and hair, the iris is always darker in colour—dark grey, brown, or that tint which is called black. In the human subject the iris is never, strictly speaking, black; the eyes which we call black are of a dark brown, and they always accompany dark-coloured hair, and complexions which are more or less dark. The individuals of the German race are distinguished by the lightness of their hair, the fairness and ruddiness of their complexion, and by blue or light grey eyes. This combination of physical characters is remarked by Tacitus, in his "Treatise de Moribus Germanorum; *rutilæ comæ, cærulei oculi;*" where *rutilæ* probably means the colour which we call flaxen; this sort of hair, and light blue eyes, are circumstances which characterise the German race at this day as strongly as at the time when Tacitus described them. All the dark-complexioned races—the Sclavonians, the Celts, the Orientals (as the Turks and the inhabitants of the Western parts of Asia) and the dark-coloured races properly so called, have dark hair and dark-coloured irides. In the Negro this characteristic is most striking, for the iris is so extremely dark that you are obliged to look very closely to distinguish between the iris and the pupil. In the eye, as well as in the hair and in the skin, the colouring substance seems to be something adventitious, which does not belong to the basis or natural texture of the part, for when the colouring substance is removed, the natural basis of the structure remains; this is the case with respect to those individuals called Albinos, who are distinguished by a peculiar and almost morbid kind of whiteness; whose hair has a sort of white, sattiny appearance, and whose skin is of a dead, sickly white. In these individuals the colouring substance of the choroid coat, and of the iris, is deficient; and the pupil, instead of being of a dark brown, is of a rose or pink colour; the iris also having more or less a red appearance. The colour, in these cases, is determined by the multitude of blood vessels composing the texture of the part, which give it a red or rose tint. If you examine the eyes of such individuals, when the vessels are injected, the choroid coat presents the appearance of an uniform red membrane without any colouring substance. In the ferret, and in the white rabbit, there is the same deficiency of colouring matter, and the red colour of their eyes is matter of notorious observation.

The retina, or last of the coats of the eye, is distinguished by the soft and almost mucilaginous state of its organization. The optic nerve passes through a small opening in the choroid and sclerotic coats of the eye; and here a singular circumstance takes place, for which those who pretend to tell us the use of every structure in the body would find it difficult to account. If you make a section of the optic nerve at the point where it passes through the coats of the eye, you will find that it becomes suddenly constricted, and reduced to one-third of its previous diameter. The appearance is the same as would be produced by tying a string tightly round the nerve. Having passed through the aperture of the membranes, its filaments spread out so as to form the soft pulpy membrane called the retina; which may be considered as a nerve spread out into the shape of a membrane. Two different parts may be distinguished in this soft texture—a medullary pulp, and a vascular membrane. With a camel-hair pencil you may brush away the medullary part of the retina in the form of thin flocculi floating in water: there will remain a kind of vascular basis, of an extremely thin and almost cobweb-like texture, made up of vascular ramifications,—divided, subdivided, and united together, till they form a most delicate membrane. The latter and the medullary pulp are respectively analogous to the pia mater and the substance of the brain. Dr. Jacob*, of Dublin, who has investigated the minute structure of the eye with great patience and success, has lately demonstrated a very thin membrane, thinner and more delicate than the arachnoid coat, on the outer surface of the retina.

In the living eye the retina is transparent, but after death it begins to become opaque. If you examine it in an animal recently dead, you will find it transparent, for you may see the choroid coat through it, as if it were not covered by a membrane. Hence the colour of the pupil is determined by that of the choroid coat, and it is generally black. In certain animals, where a considerable portion of the choroid is otherwise coloured, the pupil has a luminous or shining appearance, which is the reflection of light from the choroid coat. Any alteration, which takes place in the colour of the human pupil, must be caused by a corresponding change, either in the cho-

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roid or the retina, or the transparent media between the retina and pupil.

Having explained the texture and composition of these parts, I shall now proceed to point out the mode in which they are connected with each other. In the first place, the retina covers the external surface of the vitreous humour; the part lie merely in contact; nothing is interposed between them: there is no cellular connexion, no passage of blood-vessels. The front edge of the retina, however, or that well-defined margin which seems to be its anterior boundary, and which corresponds to the posterior edge of the ciliary processes, adheres firmly to the membrane of the vitreous humour.

The choroid coat lies upon the retina, in the same way as the retina lies upon the vitreous humour; it is merely contiguous, not actually connected with, or adherent to it. Its internal surface adheres, in the anterior part of the eye, to the vitreous humour, by means of the ciliary processes. Let me observe, in the first place, that the crystalline lens occupies the middle of the anterior part of the vitreous humour, and that on the vitreous humour, round the crystalline lens, there is a black mark, made by a number of impressions disposed in a radiated form. This mark on the front of the vitreous humour, and surrounding the crystalline lens, arises from the adhesion of the ciliary processes, and the retina does not extend on the surface of the vitreous humour farther than the point where the adhesion of the ciliary processes commences. If you detach the choroid coat from the front of the vitreous humour, you will observe the adhesion of the ciliary processes giving way, and you will see the defined edge by which the retina terminates. The external surface of the choroid is adherent to the internal surface of the sclerotica, by numerous short and soft cellular threads, so loosely, that you may easily cut the sclerotic round with a pair of scissars, without injuring the choroid. The two coats are more firmly connected in front, where they are closely united by a dense white medium, called the ciliary ligament. The point of union is just behind the cornea and the ciliary margin of the iris; so that this ciliary ligament, uniting the anterior edges of the sclerotic and choroid, corresponds to the boundaries of the iris and cornea. When the sclerotic and choroid have been detached from the front of the eye, the ciliary ligament forms a white circle, marking the boundary between the choroid and iris, and a similar circle defines the boundary of the cornea; hence the expression of orbiculus ciliaris, as applied to the part in question.

The connexion, to which I have just adverted, is an important part of the anatomy of the eye, because it will be seen, that at one and the same point the sclerotic and cornea are united externally, and the choroid and iris internally, while, at the same point, the choroid adheres internally to the vitreous humour, by means of the ciliary processes. Further, that portion of the vitreous tunic, to which these processes adhere, is closely connected to the capsule of the lens. We may, therefore, consider this part as a common point of union, embracing all the essential constituents of the globe, namely, the sclerotica, the cornea, the choroid, the iris, the vitreous humour, and the crystalline lens. It is a very important part, in a pathological point of view; thus, in inflammation of the iris, or cornea, peculiar appearances arise in the sclerotic, and the affection easily extends from the iris to the ciliary ligament and processes, and thus reaches the posterior and inner parts of the globe.

The black mark left on the vitreous humour, after the ciliary processes have been detached, is sometimes called the zona ciliaris, while the ciliary ligament, processes and zone, taken collectively, are spoken of, anatomically, under the denomination of the ciliary body, *corpus ciliare*.

To the same point where the choroid and sclerotic are united by the ligamentum ciliare, the greater circumference, or ciliary margin of the iris is affixed; thus that ligament not only connects the two former coats, but also joins the iris to them. The iris seems, to use a mechanical phrase, to be set in the ciliary body; it is firmly connected to the boundary between the sclerotic and cornea; hence these parts, more especially the former, almost always participate in its morbid phenomena.

The vitreous humour appears, in its natural state, like a portion of perfectly clear and transpareat jelly. I rather think, however, that in the living human eye it is a little more fluid than we find it in the dead eyes of these animals (sheep and bullocks), for when it escapes, as it sometimes unfortunately does, in the operation for cataract, it runs over the patient's cheek in a quite pellucid, but continued stream, resembling, in consistence, the white of an egg. We can see no fibres, no vessels, nor any particular arrangement of parts in the vitreous

humour; it is perfectly pellucid, like a lump of clear glass; it is said to be composed of a cellular texture, containing water in the interstices; if it be left to itself, and particularly if you prick it, the fluid drains and wastes away; it has a smooth, uniform surface externally, where it is in contact with the retina, the cellular substance composing the internal part being condensed into a membrane called membrana hyaloidea, or vitrea. In point of bulk, it composes four-fifths of the entire globe, occupying the whole cavity formed by the retina; indeed, if we make a vertical section of the eye, in either direction, the coats represent a thin cup, filled with the tremulous vitreous jelly. In the situation of the black marks, in the front of the humour, the membrane is double, and an irregular canal, called the canal of Petit, runs round it, and may be demonstrated by impelling air through a small opening into it. This double membrane is thrown into parallel longitudinal folds, corresponding to the ciliary processes, which are received into the intervals of the folds, the mode of union being best seen by tearing up the choroid from the vitreous humour. The black pigment covers, not only the processes, but the membranous folds to which they adhere; thus the vitreous humour presents a regular series of black parallel striæ, arranged in a radiated form round the circumference of the lens, and reaching to its capsule.

The crystalline lens, which is imbedded in the front of the vitreous humour, is a part of firmer consistence. It is retained in its situation by a compact membrane called its capsule, which is closely connected to the membrana vitrea; but is much more firm, dense, and resisting than that membrane. The crystalline lens is an optical instrument for refracting the rays of light and bringing them to a focus; in its recent state, if you hold it up to the flame of a candle, you may see the flame inverted as you would with an artificial lens. It is not perfectly spherical, but is composed of portions of two spheres,—the posterior half being more convex than the anterior. The former is completely imbedded in the front of the vitreous humour, while the latter projects on the surface of the humour, being only covered by its capsule. The external part is so soft, that it can only be compared in point of consistence to soft jelly; but if this be squeezed off, the centre is found to possess the consistence of wax slightly softened; it is, in fact, firm in the centre, and gradually looser in texture toward the circumference. The firmer central portion is called the nucleus of the lens. How is the crystalline lens, or humour as it is also called, connected in situation with the other parts? It seems to be no otherwise connected than by the mere mechanical confinement of the capsule. This investment contains, but it cannot be shown to adhere to, the lens; we cannot trace any blood vessels, any cellular connexion, or any direct adhesion. When the capsule is divided, the lens immediately escapes; if there be any vessels, they are of such extreme tenuity that we cannot demonstrate them, nor can we show that the crystalline lens is organically connected with the parts immediately surrounding it. When an opening is made into the capsule, a minute portion of water escapes, which is called the aqua or aquula Morgagni, from the name of the anatomist who first detected it.

In the living animal, and within a short period after death, the lens is perfectly pellucid, like the clearest crystal, an attribute obviously necessary to the perfect execution of its office. It gradually becomes muddy, and the loss of transparency occurs more quickly when immersed in water; hot water, alcohol, and acids render it immediately and densely opaque throughout. The kind of effect is seen in the boiled fish's eye. In its pellucid state, no fibres, nor other organic arrangement can be observed; but the opaque lens has a fibrous structure, and exhibits some subdivisions of its substance. The entire body seems divided into three parts by an equal number of lines meeting in the centre. It further appears made up of concentric layers, and these seem in their nature fibrous. But can we regard these appearances, thus obviously produced by powerful chemical agency on the dead lens as illustrating its living state? or draw from them any inferences respecting the supposed actions or changes of the living organ? Can we suppose the soft jelly of the lens, or its firmer nucleus, to be muscular, capable of contraction and relaxation, and thus of changing the figure of the organ? The capsule of the lens is a perfectly transparent texture, not rendered opaque by maceration, or slight heat, and only slightly affected by boiling water or strong acids. It is compact, and perhaps cartilaginous; so firm and tough that force is necessary to lacerate it. The anterior portion is thicker and tougher than the posterior, and almost retains its figure when detached. The membrana vitrea is connected to it at the circumference of the lens, but could be

easily separated; and the two structures are so dissimilar, that there is no ground for representing the capsule as a continuation of that membrane.

The last of the humours is the aqueous, consisting of four or five drops of clear watery fluid, filling the interval between the cornea and the crystalline lens, and escaping when the cornea is punctured. The space between the cornea and the crystalline lens is unequally divided, by the iris, into two portions, called the anterior and posterior chambers of the eye, or of the aqueous humour. Of these, which communicate by the pupil, the anterior is the most considerable, and consequently contains the largest quantity of aqueous humour. Its boundaries are the concavity of the cornea and the iris. The posterior chamber is formed by the uvea and the front of the crystalline capsule, being bounded laterally by the adhesion of the ciliary processes, the points of which project into it. The uvea seems to be in contact with the crystalline capsule, at least it is separated from it by an interval which is not distinguishable by the senses; but if you freeze the eye, you will find a small pellicle of ice between the uvea and the crystalline lens. This contiguity of the parts accounts for the adhesions so often occurring between the pupil and uvea, and the capsule, under inflammation.

I have before alluded to the question as to the existence of a distinct membrane containing and secreting the aqueous humour. It is the belief of some anatomists, that the anterior and posterior surface of the iris, and the crystalline capsule, as well as the concavity of the cornea, are covered by a delicate membrane of the serous class, the office of which is to secrete the aqueous humour. On the posterior surface of the cornea it may be detected, but I believe there are no direct anatomical means of demonstrating the existence of such a membrane in the iris or crystalline capsule.

REVIEW.

The Works of Matthew Baillie, M.D., to which is prefixed an Account of his Life, collected from authentic sources. By James Wardrop, Surgeon Extraordinary to the King. 2 vols 8vo. Longman and Co 1825.

For many years past the greatest attention has been devoted to morbid anatomy, both on the Continent and in Great Britain, and its immense value is now duly appreciated by the medical world in general. As it forms the basis of rational pathology, its utility in practice is beyond all dispute.

Dr. Baillie's *Morbid* Anatomy, and the illustrative plates, are in the hands of most practitioners, and their high character has been stamped for many years. It is, therefore, with pleasure that we behold a complete edition of the Doctor's works, as the best and most durable monument of his well-earned fame. Of these volumes we shall now proceed to give some account.

Volume first, which is ornamented with a profile of Dr. Baillie, and a *fac simile* of his hand writing, consists of the *life* of that eminent physician, and of various papers and dissertations, some of which have appeared in separate publications, some in the transactions of societies, and a few which were found among his MSS. after his decease. The second volume contains "Preliminary Observations on Diseased Structures," by the Editor, and a new edition of the Morbid Anatomy, which includes whatever additions and alterations Dr. Baillie had made in his own corrected copy of the fifth edition, besides some additions and observations by Mr. Wardrop.*

* We have heard, that among the MSS. of Dr. Baillie were also found three In-

Before noticing the "*Works of Dr. Baillie, by Wardrop*," more at length, we will make a few general remarks.

With respect to the value of Dr. Baillie's writings there can be but one opinion. We are surprised that he could condense so much valuable information into an octavo volume, like the "Morbid Anatomy," and his miscellaneous papers are the result of the observations of an anatomist and physician who had been seriously occupied with their subjects. But while the matter of all his works cannot be too highly valued, we must say that his composition is frequently very faulty, and does not appear to have received that attention which it deserved. Therefore, while medical practitioners might take Dr. Baillie as a model for precision and condensation, they ought not to follow his general style. In all his writings we especially remark an unnecessary repetition of nouns in the same sentence, whose places might have been much more elegantly filled with pronouns. We now and then see pronouns without nouns, and inelegant and ambiguous expressions not rarely present themselves. Throughout the volumes the adverb is generally misplaced. Besides, a great number of his titles, or nosological names of diseases and diseased appearances, are very badly expressed.*

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troductory Lectures on Anatomy, which were delivered before the College of Physicians. What is become of them? Ought they not to have been contained in an edition of his works? We must allow his Editor to answer these questions. It may be mentioned, however, that it is reported, that Dr. Baillie had ordered them to be printed before his death, but not to be published; a hundred and fifty copies only were to be distributed among his friends. The copper-plates, which were used for the illustration of his Morbid Anatomy, we are informed, have been bequeathed to the College of Physicians. If this be so, we hope they will not be allowed to be useless, but that a cheap edition will be thrown off for the accommodation of students, and practitioners whose means do not admit of the purchase of expensive works.

* That we do not make these charges without grounds, the reader will perceive by the following quotations:—

"There is the same feeling of distension when the hand is pressed against the surface of the *belly*, the same quick reaction *upon* removing the hand, and the same hollow sound, when the *belly* is struck by the fingers, as if *the cavity of the belly* itself had been filled with air. This has probably given rise to the opinion, that the air is often contained *in the cavity of the belly*. I can believe, however, that air may on some occasions be accumulated *in the cavity of the belly*, but *this* is very uncommon."* (Vide p. 140.)

"It once occurred to myself to observe an instance," &c. p. 118, instead of *I once saw*.

"And the tubercles were sometimes fissured upon the surface, so as to resemble *a little* common warts," p. 185, in place of *somewhat to resemble*.

"There are no symptoms which characterise particularly the formation of hydatids in the liver," p. 248, instead of *no symptoms particularly characterise*, &c.

"There are only two ways in which we can well conceive air to be formed *in the intestines:* the one is some *new arrangement* in the coats *of the intestines*," &c. p. 203. The useless repetition is evident here, and besides *chemical decomposition*, or *chemical change*, would have been preferable language.

"The gall bladder wanting," p. 265.

"Air accumulated in the intestines," p. 202.

"Lungs distended with air," p. 78.

"Lungs converted into bone," p. 81.

The four last examples of titles are still retained in the body of the present edition of the "Morbid Anatomy," the reason for which we do not know, as the Editor has adopted much better appellations in the table of contents, where they stand thus:

"Deficiency of the gall-bladder."

"Accumulation of air in the intestines."

"Distension of the lungs with air."

"Ossification of the lungs."

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* This and the following examples are taken from the fifth edition of "Baillie's Morbid Anatomy," and certainly ought to have been corrected even in the second edition.

Mr. Wardrop is well and favourably known to the public by his works on the eye, and on fungus hæmatodes &c.; for many years, we believe, morbid anatomy has been with him a favourite study; he was well acquainted with Doctor Baillie, and after his death composed a short account of this physician's life, which was first published in the Edinburgh Medical and Surgical Journal, and subsequently as a small pamphlet. With much propriety, therefore, Mr. Wardrop comes forward as the editor of Dr. Baillie's works. His general style of writing, though it might admit of some improvements, is for the most part perspicuous and forcible, and his judgment and sound sense are often evident; but of these matters the reader will have an opportunity of judging for himself.

Though we differ in some points from Mr. Wardrop, and though we should not spare our critical lash on a few occasions, he may rest assured that we bear him no malice. On the contrary, we congratulate him on the appearance of the valuable work which he has undertaken to edit.

Having made these preliminary remarks, we shall now proceed to notice the volumes before us more in detail.

It is always a pleasing task to perpetuate the fame of eminent medical men, and assuredly we are glad to have this opportunity of holding up Dr. Baillie's industry and perseverance as a pattern to the profession, and more especially to the junior branches. On this account we shall make no apology for the numerous quotations which we have selected from the account of his life, convinced, as Mr. Wardrop well remarks, that "it is not less instructive than it is pleasing to contemplate the life and character of men who have performed the duties of their station with honour and ability;" and that "their example has a powerful influence on the human mind."

"Matthew Baillie was a native of Scotland; he was born on the 27th of October, 1761, at the manse of Shots in the county of Lanark. His father, the Rev. James Baillie, was soon after removed from Shots to the church at Bothwell, then to that of Hamilton, and subsequently was elected Professor of Divinity in the University of Glasgow.

Having passed through the usual course of education at the grammar school at Hamilton, where he acquired a reputation both for industry and talent, young Baillie became a student at the University of Glasgow. He there attended the Greek and Latin classes during the first two seasons; in the third season he became a diligent mathematician, and attended the logic class and that of moral philosophy, then taught by the celebrated Dr. Reid.

Dr. Baillie's mother, Ann Dorothea Hunter, was the sister of William and John Hunter, the celebrated anatomists. From the peculiar advantages held out to him by his uncle William Hunter, he was induced, though at first rather contrary to his inclination, to choose medicine for his profession; at that time the pulpit or the bar would have pleased him better. It was William Hunter's wish that he should receive his medical education under his own immediate direction, but in order that he might obtain an English degree in medicine, his nephew's limited means made it necessary for him to procure an Oxford "exhibition," which the Professors of the College of Glasgow have in their power to bestow on deserving merit. Whilst this plan was in contemplation he had the misfortune to lose his father, and as the family was then left in narrow circumstances, the necessity to secure the exhibition became in consequence particularly urgent. It was, however, at length obtained.

Dr. Baillie had reached his 18th year when he arrived in London, and presented the following letter of introduction from his mother, by which he first became personally known to William Hunter, amongst whose papers it was also found:

'Dear Brother,—I beg leave to introduce to you my son, who is on his way to Oxford by London.

I have furnished him in the best manner my situation could afford; I now give him over entirely to you. Be a father to him—you are the only father he has alive. I hope you shall never be ashamed of his conduct; but that he shall obey your directions in every thing.

My daughters present their love to you.

I am, your affectionate sister,
DOROTHY BAILLIE.

Glasgow, March 21, 1779.
Dr. Hunter, Windmill-street.'

Baillie now commenced a career under the most favourable auspices. William Hunter, who at this time was far advanced in years, was a shrewd observer of mankind, and his long intercourse with the world had furnished him with many recollections and observations. He had at the same time a peculiarly happy talent for relating anecdote and with such expression of countenance and voice that it was supposed he might have acquired on the stage the highest rank as a comedian. To hear him tell stories and indulge those humours by the fire-side, which was a common custom when alone with his nephew, was delightful to the youth, who on the following morning had the advantage of receiving instructions from one of the most distinguished philosophers of the age.

At Oxford, Baillie continued to pursue his classical education, but as that University afforded him no means of acquiring a knowledge of medicine, he spent the whole of his time after the first year with William Hunter, except during the "terms," which amounted only to a few weeks annually.

Baillie, while under the tuition of William Hunter, directed all his zeal to the study of medicine, and soon became an indefatigable and skilful anatomist, attending at the same time the lectures given by some excellent teachers, on the other branches of medicine.

His companions of these early days have, however, heard him often express his regret, that his avocations in Windmill-street were such as to deprive him of the great advantages he might have derived from visiting some other medical schools, more particularly that of Edinburgh, which was then in its highest repute, and where he might have heard the lectures of the illustrious Cullen.

In no department of life do men rise to eminence who have not gone through a severe course of study and elaborate preparation, for whatever be the difference in the original capacities of individuals, it is the cultivation of the mind alone which elevates to distinction. No man laboured more, in early life, than Dr. Baillie, in order to acquire, what may be said to have been, the ground-work of his professional fame, and his mind thus received that general tuition which fitted it, in an especial manner, successfully to prosecute the study of medicine.

In two years from the commencement of his studies, Baillie became a teacher in the anatomical theatre; but he had not been thus employed more than twelve months when William Hunter died, bequeathing to him the use of that museum which is now deposited in the University of Glasgow, and forms so noble a monument of its founder; and it may be remarked, as a most extraordinary circumstance, that two brothers, at the same time, and in the same place, should have collected the two most splendid and most extensive museums now existing; and any person inspecting them can hardly conceive how either of two such vast collections could have been the work of a single individual. Besides the use of the museum, William Hunter left his nephew his anatomical theatre and house in Windmill-street, and also a family estate in Scotland, which he had repurchased, but which Baillie, in the most handsome manner, immediately gave up to his uncle John, considering him as his brother's natural heir. William Hunter also left his nephew about one hundred pounds a year, the remainder of his fortune being entirely devoted to upholding the museum, to erecting an adequate building for its reception at Glasgow, and to an annuity to two surviving sisters. "I have heard it said, that in a conversation a short time previous to his death, his uncle told him that it was his intention to leave him but little money, as he had derived too much pleasure from making his own fortune to deprive him of doing the same."

The honourable distinction attained by both his uncles could not fail to be a powerful stimulus to their nephew's industry, while the interesting truths which the study of medicine unfolded, and its useful results to mankind, must have been, to a mind like his, a source of much gratification.

In the museums and dissecting rooms of those great men was laid the foundation of all his future acquirements and reputation. Dr. Baillie's comprehensive and accurate knowledge of anatomy materially assisted him in acquiring an intimate and correct acquaintance with all the diseases incidental to the human frame, and instead of studying those complaints only which were necessary to enable him to practise in such cases as usually come under the care of the physician, he extended his inquiries, and became eminently skilled in general pathology. He embraced every opportunity of examining morbid appearances after

death, of which he kept accurate notes, pursuing, at this period, his pathological researches with great eagerness, and on one occasion his life nearly fell a sacrifice from a slight wound on his hand by a knife, with which he was dissecting a putrid body. His industry and application, and the dissections he was necessarily compelled to make as a teacher of anatomy, were indeed, in after life, the sources of that minute pathological knowledge for which he became so eminent.

The great value of anatomy to the physician Dr. Baillie had also learned from his own experience, as well as from his knowledge of the history of almost all those men who had distinguished themselves by their contributions to medical science; and he was particularly anxious that a minute anatomical education should be deemed as indispensably necessary for him who only intended to practise as a physician as it has always been considered to the surgeon.

Two years after Wm. Hunter's death, Baillie, associated with Mr. Cruickshanks, gave his first anatomical lectures: thus undertaking, in the 22d year of his age, the arduous task of supplying the place of one of the most distinguished teachers. Bnt such was his success, that the number of students of that school was not diminished by the loss of its illustrious founder.

As a lecturer he soon attained considerable eminence, being remarkable for the simplicity and perspicuity of his demonstrations, the order and method of his style, and the clearness and distinctness of his delivery.

Whilst he was occupied in the investigation of morbid anatomy and in giving lectures, he did not fail to take every opportunity of preserving, for private collection, specimens of diseased organs; and though small, when compared with that of either of the Hunter's, yet the museum he thus formed was highly worthy of him, and contains many excellent and well-chosen specimens, illustrating almost every diseased change in the human body. This museum consisted of upwards of a thousand preparations, and, with the exception of about a hundred, were all made with his own hands. It may be here noticed, that three years before his death he presented this collection to the College of Physicians, with 400*l.* for the purpose of keeping it in a fit state of preservation; and, by his will, he also added his medical library, containing an excellent selection both of ancient and modern books.

In the year 1787, Dr. Baillie was appointed Physician to St. George's Hospital, and two years afterwards, being then 29 years of age, he received his degree at Oxford, and became a Fellow of the College of Physicians of London. Up to this period, his opportunities of studying the practical part of his profession had been comparatively limited; but great assiduity and attention, united with natural sagacity, enabled him to acquire that tact in discriminating diseases in the living body which formed a striking feature in his future character, an acquirement which few attain who have not had constant opportunities of visiting the sick early in life, for in medicine, as in all other practical professions, the youth obtains with facility certain parts of knowledge, which those more advanced in years find it very difficult, if not impossible, ever to acquire."

The following account of the work on which Dr. Baillie's fame, as a physician, was founded, must interest every medical practitioner:—

"The taste which the Hunters created in this country for the study of morbid anatomy, marks the period in which they lived as one of the most important and proud eras in our medical history, and their nephew acquired a taste for this branch of medicine, and cultivated it with great assiduity. Surrounded by their labours, it was not long before he made an admirable use of the valuable stores contained in their museums. A multitude of pathological facts were there illustrated, which he collected and arranged, and which formed the basis of his work on Morbid Anatomy, first published in 1795; a work which, whether we consider the subject or the manner in which it is treated, has been justly esteemed as one of the most practically useful and most valuable acquisitions to medical science. Till that period, all the knowledge on this subject was scattered through the voluminous writings of Bonetus, Lieutaud, and Morgagni, so that the clear and concise account of the diseased changes of structure of the different organs of the human body given by Dr Baillie, formed, not only a most excellent elementary work, but was no less useful as a general pathological treatise. This work was soon translated into the French and Italian languages, and also into German, by the celebrated Professor Soemmering.

About four years after the appearance of the work on Morbid Anatomy, he began to publish the Engravings for its elucidation. Of these it may be truly said, that for choice of subjects, accuracy

of drawing, and beauty of engraving, they have never been excelled, and, along with the work itself, must remain a lasting memorial of the zeal, the industry, and the talents of the author."

If we were to take Mr. Wardrop's opinion, "Dr. Baillie's writings are all remarkable for the simplicity of their style, and for the truth and conviction they never fail to convey to the mind of the reader." To the latter part of this sentence we readily subscribe, but from the former we must dissent, as we have already shown that Dr. Baillie's style is far from being *remarkable for simplicity*, because his meaning is now and then dubious, and he employs much unnecessary tautology; indeed the Editor seems to have forgot what he has said himself, in his advertisement, upon this subject, and both he and the reader will be of our opinion after a perusal of a single sentence.

"In a few instances (says Mr. Wardrop) I have altered terms, and though sometimes the author's style may appear objectionable, I have not ventured to make any change except where absolutely necessary for the sake of perspicuity,"—*ergo*, Dr. Baillie's writings are *not* "all remarkable for the simplicity of their style."

We dwell more upon such defects, because we are of opinion, that medical men in general pay far too little attention to the composition of their writings, whether in separate works or in the periodicals; and because we would remind them that a clear, chaste, and elegant style has a very seducing effect, even upon medical readers. Who does not recal to mind with what pleasure he has read the eloquent works of Cuvier, Beddoes, and John Bell, and how these writers have cast a charm over even the most simple narrative and the most devoid of effect, viz. the history of a patient's disease. We could instance various works to illustrate the ignorance and total want of taste of their writers, but we shall, for the present, avoid so unenviable a task, and recur to the life of Dr. Baillie.

"In 1799, after having for thirteen years assiduously performed the duties at St. George's Hospital, he resigned that appointment, giving up, at the same time, his anatomical lectures, his whole time being now engaged in the practical part of his profession."

After alluding to the fact that Dr. Baillie, notwithstanding all his advantages, was not fairly established in practice till he had nearly reached his fortieth year, the Editor makes the following remarks, which cannot but please our readers:—

"It is curious to trace the variety of circumstances which have led medical men to celebrity in this metropolis. Dr. Baillie was one of those whose success is greatly to be attributed to professional knowledge, adorned with every private virtue. Minute anatomical study had been too much disregarded by physicians, and conceived necessary for those only who practised surgery. His comprehensive knowledge of anatomy, therefore, could not fail to give him eminent superiority over those who were competing with him for practice. Whenever more than ordinary scientific precision was wanted, his opinion was resorted to; and the advantages which his anatomical skill afforded him soon established his reputation among the better informed in his profession, as well as secured to him the public confidence. However unaccountable it may appear, yet it is no less true, that many of the physicians then in London were of opinion that his pre-eminence in anatomical knowledge, instead of establishing his fame as a practitioner, would be the means of not only impeding, but absolutely of frustrating his prospects, and he was, in consequence, repeatedly advised to relinquish his anatomical class."

The Editor, after informing us that Dr. Baillie possessed, in an eminent degree, a facility in distinguishing diseases, and an accurate knowledge of the precise effects and extent of the power of medicine, adds,—

"I have frequently observed this superior knowledge of his art lead to the remark, that his practice was inert; for when he perceived certain and irremediable changes in diseases, or when they had a fatal character from their commencement, he would merely attempt to palliate, whilst a practitioner, not possessing his accurate knowledge, would have made fruitless efforts to cure the disease."

Mr. Wardrop adverts to Dr. Baillie's clearness, conciseness, and unaffected simplicity in the mode of delivering his opinions, and to his natural unassuming, but decided and impressive manner, and adds,—

"His slender form, together with the great modesty of his deportment and the simplicity of his manners, often appeared very striking to strangers, who, from his distinguished character, had been led to expect something more imposing in his person and manner."

Dr. Baillie in no respect stands higher in public esteem than for the remarkable consideration he paid to the feelings of his professional brethren, more particularly the younger branches, and his punctuality in his intercourse with society, especially "in answering letters, paying visits, and keeping professional appointments." We would seriously recommend some of Dr. Baillie's successors to ponder well the import of the following sentence, and to take a lesson from the eminent individual who uttered it.

"I consider it," said Dr. Baillie, "not only a professional, but a moral duty, to meet punctually my professional brethren of all ranks. My equals have a right to such a mark of my respect, and I should shudder at the apprehension of lessening a junior practitioner in the eyes of his patient, by not keeping an appointment with him."

Mr. Wardrop, having noticed the chief incidents of Dr. Baillie's medical life and character, next tells us a something of the "*man*" in his more domestic circle. He alludes to his communicative disposition; the readiness with which he tendered his advice, and pointed out the "rocks and shoals" to those commencing business in this metropolis; the comparative feebleness of his physical frame, and the simplicity of his personal habits. Some of our *high-flown* practitioners may find an antidote in Dr. Baillie's conduct and manners, for their arrogance, pride, and self-sufficiency, and attention to their *beau-ideal* of dress. Let them read the following lines, and they will stand appalled. Dr. Baillie "seemed to have a particular dislike to the affectation and peculiarities of dress displayed by some medical men, as derogatory to the respectability of their profession."

Mr. Wardrop, in very gentle language, alludes to the Doctor's "irritable temper," and attributes it to his being harassed with business. Any sally of his impatience, whether toward a patient or his family, was generally followed by sincere compunction, and the making of "amends." Dr. Baillie had his failings as well as other men, and it is to this extreme irritability that we must attribute the excessive chagrin he is said to have long felt at not being employed by the present King. A man of his education, talents, and eminence ought to have been above such a paltry feeling. But man is mortal, and the frailties of his nature show themselves in a thousand ways, even in the most perfect of his species.

Mr. Wardrop tells us, that Dr. Baillie amassed a very considerable fortune, and that he was extremely liberal. Various striking instances of his generosity to ward patients are recorded, which we trust will find imitators in all ages.

The love of country was a prominent feature in Dr. Baillie's character, and after thirty years' absence, he made a visit to "the home of his fathers," which however, failed to yield him the pleasure his imagination had anticipated. Soon after this event, his health, which had for some years materially suffered from

the fatigue of business, got much worse; he became emaciated and feeble, and even his mental faculties at times were deprived of their wonted vigour.

"In the early part of the summer of 1823, he had an attack of the mucous membrane of the trachea, which, though it at first created little disturbance, became in the month of June very troublesome, being attended with some fever, and a frequent cough. In this state he quitted London for Tunbridge Wells, and returned in a few weeks, the more teazing symptoms of cough having been relieved by local bleeding and blisters, but in no respect had his general health improved. His feebleness was now so great, that even conversation was a considerable effort, and he had completely lost all relish for food. Though aware that his situation was precarious, he seemed to entertain the hope of being able to return to London in the ensuing winter, and resume, to a certain extent, his professional avocations; for he was persuaded that he had no organic affection, and that, by repose and living in the country, the digestive organs, whose functions were so much deranged, would be restored. Such were the expressions he then used, when adverting to his situation.

With these hopes he went down with his family to his residence in Gloucestershire, but instead of gaining strength after his arrival there, he became daily more and more enfeebled, and, after much bodily suffering, but with a mind unshaken, he expired on 23d September, 1823. Thus terminated the life of a man at once an example to the living by his virtues, his inflexible integrity, his great moral worth, his benevolence to his afflicted fellow creatures, and his high intellectual endowments."

With another paragraph we shall conclude what respects this physician's life.

"Dr. Baillie was married, in the 29th year of his age, to Sophia, second daughter of the late celebrated Dr. Denman. From this marriage are two surviving children, Elizabeth Margaret, married to Richard Milligan, Esq., and William Hunter Baillie. The extent of talent united in his family and their connexions, was remarkable. He was not only the son of an able Professor and nephew of the Hunters, but his sister, Miss Joanna Baillie, has attained the most elevated rank in literature. Mrs. Baillie's sister was married to the late Sir Richard Croft, a man whose name is endeared in the recollection of many, as well for his manly and upright heart as for his professional celebrity; and Mr. Denman, who has distinguished himself so much at the bar, was Dr. Baillie's brother-in-law."

After having perused 66 pages respecting the life of Dr. Baillie, we come to "*Contents of the first volume.*" This table is assuredly misplaced, or the life must form no part of the contents. Following the same rule in Vol. II. the table of contents should have followed the Editor's preliminary observations, and these observations should not have been enumerated among the contents. Why will not medical men and their printers attend to propriety and accuracy in getting up a book? By-the-bye, it may be remarked, that the first volume is very small; it only contains three hundred pages. The second volume consists of 480 pages, so that there is a great inequality of size, and we do think there ought to have been so of their value. Valuing the second volume at 13*s.* and the first at 8*s.* the price of the work should not have exceeded a guinea. But we leave this to be settled by the editor, the publishers, and the purchasers.

The first volume contains miscellaneous papers and dissections, by Dr. Baillie; some of which are very interesting, while others possess little deserving particular notice, as great improvements, or at least changes, have taken place in medical practice since the period of their dates. Among the miscellaneous papers, are observations on paraplegia, hydrocephalus, ossification of the blood vessels, the deficiency of a pericardium, emphysema, secondary measles, on embalming dead bodies, &c. &c.; and among the dissections we find enumerated, regeneration of the rete mucosum, ulceration of the stomach, rupture of the liver, fungus of the bladder, inflammation of the larynx, the state of the impregnated uterus, fungus hæmatodes of the arm, &c. &c.

To different articles the Editor has added notes, and their value makes us regret his parsimony in this respect.

We shall not hesitate to copy Dr. Baillie's observations on a disease which must have been witnessed by every man who has had much practice; we allude to "Observations on a strong pulsation of the aorta in the epigastric region."

"I have been frequently consulted within the last fifteen years, respecting a pulsation which is distinctly felt in the epigastric region. When the patient first discovers this pulsation, he is generally greatly alarmed, and he has seldom found much comfort from the opinion given him by his medical attendant concerning its nature. From a good deal of experience in cases of this kind, I am enabled to state that the increased pulsation of the aorta in the epigastric region, very rarely depends on any disease of the aorta itself or of its large branches in that place; and that this occurrence is almost constantly of very little importance. In the course of my experience, I recollect but one instance in which such a pulsation depended on an aneurismal swelling of the artery.

This symptom or complaint in question is more apt to take place at the middle period of life than at any other; but I have known one or two instances of it in persons about the age of thirty. It occurs both in men and women, but more commonly in the former than in the latter. In one individual the pulsation is much more strongly marked than in another; and in the same individual it varies a good deal in strength at different times. In some instances the pulsation is more strongly felt in the evening than in the forenoon. It is generally more distinctly felt when the patient is in the horizontal posture; and sometimes the pulsation is so strong, when the surface of the epigastric region is exposed to view, as to be visible to the eye, even at some distance. In some instances the boundary of the artery, while it pulsates, can be distinctly felt, and occasionally it may even be traced as low as the umbilicus. I do not recollect that there is any peculiarity in the pulse at the wrist of persons affected with this complaint. It is commonly neither intermittent nor remarkable for frequency, strength, or weakness. I have had two opportunities of examining the state of the arteries in the epigastric region, after death, in persons who had this pulsation very strongly marked, and who had died from other diseases. The one person died from an ulcer in the stomach; and the other from a typhus fever of long duration, in whom the stomach was sound. In both cases the aorta itself, the branches of the cæliac artery, and the superior mesenteric artery, were perfectly free from all appearance of diseased structure. The arterial system in these two cases was not more extensively examined; but there was no reason to believe that any part of it was diseased.

In many instances it is, perhaps, difficult to ascertain the causes of this increased pulsation of the aorta in the epigastric region; but in most cases it will be found to be connected with an imperfect digestion, and an irritable constitution. When it has once taken place, I believe it seldom subsides entirely, although it varies in degree at different times. However, it does not produce much inconvenience, more especially when the mind has ceased being anxious about it; and a person may continue to live with this symptom or complaint just as long as if it did not exist. Some years ago, I was consulted by an old man concerning a slight paralytic affection, and when the conversation respecting that complaint was finished, he spoke to me about a pulsation in the epigastric region. It was most distinctly to be felt; and he told me that on account of this pulsation he had about twenty-five years ago consulted Sir Cæsar Hawkins, Mr. Bromfield, and Dr. Hunter, before the time of his consulting me. Sir Cæsar Hawkins and Mr. Bromfield told him that it was an aneurism of the aorta; and Dr. Hunter said that he did not know what it was. Dr. Hunter saw enough of peculiarity in this case to make him doubt, but not enough to enable him to decide that there was no disease in the aorta.

This case shows, that a person may live for many years with a strong pulsation of the aorta in the epigastric region; and from the appearance of the patient, his general health seemed to have been very little impaired by it.

It would be a matter of considerable importance, if we could at all times distinguish with certainty the pulsation of the aorta, about which we are now treating, from that pulsation which is occasioned by aneurism of the aorta in the epigastric region. This, however, will in some instances be hardly possible, and more especially in the early periods of aneurism. When the boundaries of the artery can be distinctly felt, and when the artery itself can be ascertained to be of the usual size, it is clear that notwith-

standing the force of the pulsation, the disease is not aneurism. When a round circumscribed tumour pulsates against the fingers applied to the epigastric region, there can then be little doubt that the disease is aneurism either of the aorta or of the cæliac artery. When the pulsation has continued for several years without the health being materially impaired, even if the boundaries of the artery should not be distinctly felt, yet there is the strongest reason to believe that the pulsation of the artery does not depend upon an aneurismal swelling in it.

I am not acquainted with any means of curing this symptom or complaint. Whatever improves the digestion and renders the constitution less irritable, will be of use in mitigating the increased pulsation; and above all other circumstances, it is useful to remove the patient's anxiety respecting the disease, when it can be fairly done.

I have thought it of some importance to communicate my observations respecting this complaint, as it may tend in many instances to relieve the anxiety of the patient. It may likewise, in time, lead to a successful treatment of the disease, with which the increased pulsation of the aorta in the epigastric region is connected.*

Dr. Baillie's observations respecting the green jaundice merit particular attention.

"Jaundice," says he, "may be divided into two kinds, viz. the yellow and the green. In the first kind, the skin and the white of the eyes are more or less tinged of a yellow colour; in the second kind, the skin and the white of the eyes are tinged of a green colour, more or less mixed with yellow, but the green colour is very predominant. In some parts of the skin the green colour is very deep, so as to have some blackness in its hue; and this circumstance has given rise to the name of black jaundice, by which this disease has been often distinguished.

The green jaundice by no means occurs so frequently as the yellow jaundice, but it occurs sufficiently often to have been seen by every practitioner of considerable experience. Little, however, has been said of it in books, and therefore it may not be altogether unimportant to lay before the public some few remarks which I have made on it.

The green jaundice occurs more frequently at the middle and more advanced periods of life than at any earlier age; but it occasionally occurs in young persons It is more frequent in men than in women, and it seems to me to be less connected with intemperance than the yellow jaundice.

In the green jaundice the liver is often enlarged, hard, tuberculated throughout its whole substance; but this morbid change of structure is also often confined to a single part of it. Occasionally, but I believe rarely, no induration is discoverable in any part of that viscus. Little pain is generally felt in the green jaundice, but there is often some sense of tenderness on pressure in the region of the liver. I think the green jaundice is less frequently attended with dropsy of the abdomen than the yellow jaundice, when the latter depends on an induration of the liver.

The pulse in the green jaundice is commonly natural, both with respect to strength and frequency, unless some circumstance has occurred to irritate the constitution. There is sometimes a distressing itching of the skin in the green jaundice, in the same manner as in the yellow jaundice, and sometimes a strong sensation of heat is felt in the palms of the hands and the soles of the feet. The stools are generally pale in the green jaundice, but are occasionally tinged with bile. The urine is commonly much coloured with bile, and tinges linen of a deep yellow colour. Sometimes in slighter forms of the disease, the urine, although deep in its colour, will not impart a yellow tinge to linen. The urine is often not so small in quantity as in the yellow jaundice; it generally is clear, and rarely deposits a pinky sediment.

In many cases of the green jaundice, the appetite and the digestion are much impaired, and in some cases they are nearly as good as in health.

The yellow jaundice, provided the substance of the liver be not very much diseased, the patient generally recovers from, and the yellow tinge leaves the skin com-

* The publication of this paper has been extremely useful, in calling the attention of practitioners to discriminate between the affection of the aorta therein described and aneurism. It is, however, proper to remark, that it has occasionally led to error; and I have known more than one case of strong pulsation in the epigastric region, where Dr. Baillie conceived no organic affection to exist, but which opinion was proved to be erroneous after death. In these cases, when there is no organic affection, the increased pulsation will usually be found connected with derangement in the functions of the primæ viæ.—Ed.

pletely. In the green jaundice the patient very rarely recovers, and the green colour, in fatal cases, never leaves the skin during life. There is sometimes a little difference in the deepness of the shade of colour, but it never forsakes the skin altogether.

The progress of the disease in the green jaundice is always slow, but the fatal issue of it is almost always certain. Patients will generally live a year or two with this disease; but in the course of that time the body becomes much emaciated, the powers of the constitution waste, and at length they sink altogether. In a few instances patients live for many years, and even enjoy tolerable health, but the green tinge never leaves the face.

Mercury seems, in general, to have very little beneficial influence on the green jaundice. The kind of induration which commonly attends this disease is not affected by mercury in the same manner as those indurations of the liver usually are which sometimes accompany the yellow jaundice. Mercury, however, will sometimes alleviate for a time the uncomfortable feelings of the patient, and induce him to think that he is getting better, but it produces no substantial amendment. The daily use of neutral salts, in moderate doses, has appeared to me occasionally to have been of some advantage; but of all the cases of green jaundice which have fallen under my notice, I recollect two only which have recovered.

In the green jaundice, the bile is probably in some respects chemically different from the bile in the yellow jaundice, and this, perhaps, may constitute a material difference between the two diseases. It would, therefore, be a matter of some importance to have the bile in the green jaundice accurately examined by an able chemist. This examination would not only make us acquainted with the chemical difference between the two sorts of bile, but might, perhaps, suggest some improvements in the mode of treating the green jaundice. We may be said at present to be in a great measure ignorant of the proper method of treating this formidable disease."

We now come to Vol. II. of Baillie's Works.

We may thank the Editor for the very copious table of contents, for the changes he has made in the titles of the articles, and for the reference to the pages which are added, and which must prove a great convenience. In fact, such a table of contents replaces an index, and as the work never had such an appendage, it was much wanted.

The contents of the second volume consist of what may be called the sixth edition of "Baillie's Morbid Anatomy," and of "Preliminary Observations on Diseased Structures," by Mr. Wardrop.

We fancy that we comprehend the Editor's meaning by the words "*Diseased Structures*," that they relate to diseases of the different *textures* or *structures* of the human frame,—as bone, muscle, membrane, blood vessel, nerve, &c., and that they have a particular reference to the phraseology of the French pathologists, especially that of the ingenious Bichat. For the sake of students and the junior branches of the profession, we wish that Mr. Wardrop had extended his remarks upon this subject, so as to have rendered his objects more evident. We have perused all this gentleman's own works, and have generally remarked in them considerable precision and simplicity of expression, but we must confess that a veil of obscurity hangs over two or three parts of his "*Preliminary Observations*." Whether this be owing to the dulness of our capacity, to the excessive condensation of the author's practical remarks, or to a want of perspicuity in the writer, we shall not venture to determine; the reader will have an opportunity of doing this for himself.

"On taking a general view of the diseased changes of the different organs and textures of the human body, we discover striking differences in the character of these changes, and in the combination of the phenomena which accompany them. Some diseases change the structure of only one organ, or one or more textures of an organ, whilst others attack various organs, or several textures at the same time.

There are some diseased structures which influence the functions only of the organ affected; others contaminate more

of less the whole system. Some diseases go through a particular course, and leave the body uninjured; *whilst there are others which proceed without interruption until they destroy life.* In some diseases the new growth resembles one of the natural structures or textures of the body; in some it is a substance *sui generis;* and in others the diseased growth is a combination of both these classes of structures. The various subdivisions of diseased structures thus formed must, however, be considered as artificial. Such views are, nevertheless, of great importance, for by tracing the analogies that exist between diseases, as they occur in different parts of the body, not only is the study of pathological anatomy much facilitated and abbreviated, but we are frequently assisted in acquiring an accurate knowledge of diseases, of perceiving differences in their general character, and of establishing general principles for their treatment.

I ought to observe, before proceeding further, that what has now been said is meant to apply only to diseased structures, the department of medical science on which alone Dr. Baillie has professed to treat; for it may be remarked, that there are many other phenomena attending particular diseases, not coming within the province of pathological anatomy, which enable us still further to view them and class them together by an artificial arrangement. Some diseases, for example, can be propagated by inoculation; others by contagion; some affect an individual only once during his life; some are idiopathic, others are symptomatic; some are hereditary, others are epidemic. *There are still other* subdivisions of diseases *which have been formed* from changes in the qualities, or an increase or diminution of the quantities, of the fluid secreted by different organs. In some of these diseases fluids are formed which have no resemblance to any of the natural secretions; and in others concretions, or depositions from the fluids take place; in other diseases, living animals are produced."*

* As we have said so much of style, it may be remarked, that the expressions in italics, in the above quotation, show a kind of unnecessary and inelegant circumlocution, very common in medical books. In the 1st example, it was only necessary to say, *whilst others proceed;* and, in the second, *other* subdivisions of diseases have been formed, &c.

Now we would ask, whether these remarks could not have served as well (if not better) as a kind of proemium to the title "Preliminary Observations on Diseases in general" as for that on "*Diseased Structures*"?

Specific diseases:

"Those diseases," says the author, "are termed specific, which attack several organs, or several textures of an organ indiscriminately, and which are, at the same time, attended by a particular train of constitutional symptoms, and always pursue a particular progress—schirrhus, fungus hæmatodes, fungus melanodes, scrofula, gout, scurvy, &c."

We avow that we do not fully understand what the author means by the terms "Specific Diseases," after reading his definition. Is not every disease specific? Are not inflammation (phlegmon) and erysipelas included by the first sentence of the author, and would not both inflammation and erysipelas be called by him *common diseases*, or, to use his own words in contradistinction to *specific diseases*, "common diseased structures"? As we doubt not the Editor will have a call for another edition of Baillie's works we would advise him to enter more at length into the subject, and to be more explicit in the elucidation of his statements.

We wish to point out in forcible terms the great necessity of complete perspicuity in nosological language, the more especially because we remark, by an advertisement at the end of Vol. I., that Mr. Wardrop purposes soon to publish "Outlines of a System of Nosology, founded on the basis of Pathological Anatomy." Nothing is more difficult than to form unexceptionable definitions, either in mathematics, chemistry, botany, anatomy, medicine, or any other science. Some of Euclid's definitions are evidently unjust or false, and Cullen's Nosology is daily becoming more objectionable, as the light of Science

illuminates her cultivators. We ourselves, in the course of preparing lectures on different branches of science, and especially natural history, have experienced the extreme difficulty, nay, even the imposibility, of defining objects by human language, and hence have been led to form an axiom, that "Nature abhors a definition," thus telling us that the stupendousness and infinitude of her works are beyond the comprehension of the mind of man. The same difficulty will be found in every department of the arts and sciences, so that the more we scrutinize definitions, the more shall we detect their imperfections. But to return to the subject before us:

In this section we were rather surprised to find the omission of chancre as the most frequent primary form of syphilis; unless, indeed, the author include it under affections of the skin. We were more astonished, however, on finding bubo enumerated among the secondary symptoms of that disease; bubo has generally been reckoned a primary affection. It is sometimes produced, to be sure, by the absorption of matter through the lymphatics communicating with a chancre—the primary effect in its vicinity, and according to this reasoning, it may be called secondary, as much as sore throat, eruptions on the skin, nodes, &c. &c. But, in respect of time, bubo cannot be reckoned secondary, because it generally shows itself in an early stage of the disease, while the chancre remains; whereas the other affections commonly evidence themselves after some weeks or months have elapsed, and often when chancre, bubo, and all other symptoms of the disease have disappeared.

Mr. Wardrop's remarks on particular diseased structures are very compressed, but clear, and deserve every consideration.

We cannot follow the Editor in his observations respecting scrofula, scirrhus, fungus hæmatodes, fungus melanodes, and compound diseased structures; with regard to which there is much to praise and little that deserves censure, the phraseology, at times, excepted.

The Morbid Anatomy is in every body's hands, and we could add nothing to the high character it has long maintained. The novelties of this edition consist chiefly in some notes by the Editor, and of some additions also by him, in the body of the work, all composed in the same condensed manner that Dr. Baillie employed. We regret that Mr. Wardrop has been so sparing in his notes, as we think considerable interest might have been excited by a short account of all the novelties in medical science, since the publication of the first edition of the Morbid Anatomy; for Dr. Baillie barely kept pace with the rapid progress of his profession; and, indeed, he made few additions to the Morbid Anatomy after the second edition saw the light.

Among the additions by the Editor are remarks on the accumulation of air in the pericardium, unusual fatness of the heart, concretions in the cavities of the heart, excrescences on the valves of the heart, indurations of the parietes of the heart, flaccidity of the parietes of the heart, concretions in the thorax, granular tubercles in the lungs, fungus hæmatodes in the lungs, liver, urinary bladdar, &c. &c.

We have already extended our Review beyond our original intention, and we must now conclude, by admonishing the Editor to be less sparing of his remarks and additions in any future edition.

ABUSES IN THE COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—Are we, as individuals and members of a liberal profession, whose object is to elevate and support the best interests of society, to remain quiet spectators of the corruptions of our College?—to see its intentions polluted, its advantages engrossed by a set of malignant old women, who are too imbecile properly to appreciate the treasures it contains? Is it not time for the Members to combine in just indignation against the despicable faction which has plundered us of our rights? Have we not contributed towards the support of this Royal Institution, and are we not entitled to a free inspection of this our joint property?

Parliament granted a certain sum to the Corporation of Surgeons to purchase Mr. Hunter's Museum, to be considered from thence the property of the public, for their use and benefit; but I should be glad to know how the *Members* of this Corporation, or the public, are to be benefited by the contemplation of the labours of this distinguished anatomist, in the cursory mode of observation adopted in the Royal Museum. One might as well endeavour to scan an epitaph on a tombstone in a rapid coach as to understand the points of display in such innumerable preparations. And these are epitaphs to the name of Hunter, on which the student might dwell with increasing pleasure and increased instruction; every successive footstep presents volumes of useful knowledge. But the Council have placed medical men under an interdict, in visiting these cloisters, not to purloin, steal, or pettylarcenize any notes of useful or practical information. How different is the state of other nations: in France, Germany, Holland, and other seats of science, liberality exists in full vigour; all their museums and collections of curiosities are open to the inquiring stranger "from night till morn, from morn till dewy eve." Every opportunity is thus afforded him to examine such repositories, and every civility is shown him in his tour. But as for England, her institutions are obscured, and their purposes diverted by the overbearing tyranny of petty aristocracies, nursed up even in the lap of science. Let us hail, then, with applause, the dawning of continental liberality, especially manifested in the courteous behaviour of some of our junior hospital surgeons.

One would expect, that the certificates only of the most eminent anatomists and surgeons would be received by the Court of Examiners; but this also is carried on with the same plan of partiality whilst the certificates of men with scarcely any pretensions to accurate knowledge and minute anatomy are received, many of the most celebrated men have toiled in vain through a long series of academical exertion, in the hope of their certificates being acknowledged by this Court.

Such is the state of corruption in our councils, and such are the deputies of this Court; in them our interests are reposed, and by them should the *res medicæ* be properly regulated. But every thing has become as weak and decrepid as luxury and years can make it; and every opportunity of raising up monopolies is studiously observed; breaking through all ties of primitive abjuration, in glory to the molten god. Abuses like these call aloud for a general voice of dissatisfaction from the whole medical republic, whose interests and whose privileges are almost entirely rescinded.

I am
Your obedient Servant and
CONSTANT READER.

MIDDLESEX HOSPITAL.

To the Editor of THE LANCET.

SIR,—As it is your professed object to direct your attention to every species of corruption connected with public Hospitals, I beg to call your attention to the proceedings of the Weekly-board and Surgeons of Middlesex Hospital. The circumstance of a poor surgery-man being dismissed and prosecuted with relentless rigour, for imitating a superior servant of that institution, by *drawing a few teeth* from a deceased patient, must be within the recollection of your readers. In that case, investigation immediately followed, and the unprotected man was brought to the gates of a prison, where however, fortunately, the matter terminated. Lord Robert Seymour, who has been so great a benefactor to the institution, will, I trust, explain to the public the proceedings in question.

If there be a law against removing *any part* of the body of a dead patient, Mr. Bell has been guilty of a violation of it, and is as much entitled to punishment as the person alluded to; if, on the contrary, no such law exist, why prosecute an under servant, while his superior is permitted to promote his interest or gratification with impunity? This spe-

cies of legislation verifies the language of the satyrist, when he said "Laws are like cobwebs, which catch small flies, but suffer the great ones to break through them."

I trust you will continue to furnish your readers with reports from this Hospital, which are of inestimable value, not only to students, but to individuals in practice. The operations performed by Joe Burns and John Shaw, or the senior and junior Joes as they are called, will, no doubt, excite that interest which the labours of such distinguished persons cannot fail to produce. The operation of amputation below the knee, by *young* Joe, which required *an hour and ten minutes* for its performance, and the particulars of the long-looked-for operation of lithotomy, by the same person, together with the appearances upon dissection *nine hours afterwards*,* will no doubt be acceptable to your readers.

Permit me, in conclusion, Sir, to congratulate you on the extensive circulation of THE LANCET, and the success attending its operations.

I am, Sir,
Yours truly,
OBSERVER.

HOSPITAL INSTRUCTION.

To the Editor of THE LANCET.

SIR,—The season for medical instruction having now commenced, I am induced to offer a few thoughts on the subject, should you think them not altogether unworthy a place in your useful publication.

As you have taken so active an interest in the progressive improvement of every branch of medical science, by a more extensive diffusion of medical knowledge, in a way peculiar to yourself; as you have laboured so much to correct the abuses in some of our public hospitals; and as you have so commendably advocated the cause of medical and surgical students, and boldly asserted their rights, as Hospital Pupils, to all the practical knowledge it may be in the power of the physicians and surgeons to communicate to them,—I feel disposed to express to you my own obligations, as a medical student on these accounts; and I most sincerely hope, for the good of mankind generally, whom it so much concerns, that you will fearlessly persevere in so praiseworthy a cause, whatever opposition you may meet with from those individuals who fail to fulfil their duty as teachers; I hope, that by a vigilant watch over hospital affairs, you will assist the students in obtaining, for the future, something more than a mere walk, or rather *run*, through the wards, for the money they expend. I trust you will endeavour to stimulate the physicians and surgeons to be a little more communicative—to bestow a little more bed-side instruction than they hitherto have done; to take care that, in surgical cases in particular, all the pupils may have a proper view of the patients; and that, with respect to physicians' patients, they be informed what the diseases really are.*

When I have considered the advanced age of some of the hospital practitioners, the great experience they have had, and the store of medical knowledge they necessarily possess, I confess I have often been much disappointed, and I well know other students have been disappointed likewise, on account of the scantiness of oral communication from those veterans in physic and surgery, when surrounded by their pupils, in the wards of the hospitals. What a mortifying circumstance it must often have been to many a thoughtful and diligent student, desirous of accumulating all the professional knowledge in his power, and of adding to his store on every occasion; what a mortifying circumstance to such a one, to hurry through the wards at the heels of a physician or surgeon, without culling any information, and to walk out again just as wise as he walked in. I doubt not the time will come when there will be a reformation in this department of the medical schools, a little more pains bestowed and a little more professional duty discharged, for the money advanced; nor am I without hope that some new and improved method will be adopted for the purpose, not only of facilitating the acquisition of medical knowledge, but of fixing in the minds of students the knowledge they once obtain, more especially in the anatomical department.

By a reference to the communications made to THE LANCET by some of your Correspondents on these subjects, somewhat, I believe, about twelve months ago, (I have not at this moment time to refer,

* In consequence of the length of Mr. Lawrence's lecture, and of the review, we have been under the necessity of postponing the account of the above operations, as well as several articles of interest, to our next number.—ED

* In some of the hospitals the name of the disease is affixed to the card over the bed of the patient; in others, not.

you may possibly meet with some suggestion not altogether unworthy a second consideration. I think a medical society formed among pupils would have its use, especially if they provided themselves with a well-selected library. In a variety of ways they might, by a judicious plan, benefit each other by associating together for the express purpose. How often does it happen, that a student, especially among the younger ones, is desirous of obtaining information on some particular subject; and yet, either from timidity, or from a fear of being considered too troublesome, he refrains from soliciting the information he needs from the mouth of his teacher. On the contrary, were he a member of a society composed of what he considered his equals, that equality, and his privilege as a member, would, from the very end and design of the society, invest him with a right to endeavour to obtain whatever knowledge he was particularly in search of, which other members might communicate.

Wishing you, Mr. Editor, increasing success, and increasing usefulness,

I remain,

Your benefited reader,

A MEDICAL STUDENT.

DUBLIN MEDICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—In the able and highly characteristic sketch of Mr. Macartney, given by your talented Correspondent "Erinensis," I find an allusion made to Mr. M's exertion to establish a Medical Society in Dublin, the inference from which is, that its failure was owing to want of energy on the part of the "members and pupils." I am not well acquainted with the origin of the Society, but during my stay in Dublin, as a medical student, I had opportunities of knowing that (with the exception of Mr. Macartney) the Society was not supported or encouraged by the Professors, nor sanctioned by the Provost. The latter looked on it with a jealous eye *as a Society*, (for what reason I know not,) and threw obstacles in the way of its permanent establishment. The former, who were obliged to take, in their turn, the clinical attendance of Sir P. Dun's Hospital, dreaded the discussion of their practice by the students, who generally related the cases under treatment at the Hospital. The Professors were all (nominal) Presidents of the Society, but could never be prevailed on to sanction its meetings by their presence. When invitations were sent them by the Secretary, there was always some excuse for their non-attendance. The students contemporary with me were all very anxious to see the Society established on a respectable, orderly, useful, and permanent basis; but their united endeavours, without the approbation of the "higher powers," could not effect so desirable an object. The Professors, had they their pupils' interests at heart, should have promoted, by every means in their power, an Institution that would certainly have produced decided benefit to those who attended the Medical School; but they did not do so, and this, Sir, was one of the principal causes of its falling into disrepute; and lately the meeting-room of the Society was converted into an arena for bombastic "*grinders*" to exhibit their tinsel knowledge, which could not fail, from repetition night after night, to excite disgust.

Mr. Macartney deserves the gratitude and thanks of every student attending his class. There is no man so alive to their interests and improvement. I wish much, that your talented Correspondent "Erinensis" would furnish himself with materials and recur to this subject, which must prove highly interesting to future pupils.

With most sincere wishes for the success of your highly important and valuable publication, I am, Sir,

Yours,

HIBERNICUS.

P.S. I believe Mr. Macartney, to this day, has the library belonging to the Medical Society in care. The period I speak of above, was between 1819 and 22.

To the Editor of THE LANCET.

SIR,—Your caustic and uncompromising, but just and impartial criticism upon professional delinquencies, whether of a public or private character, whilst they render your highly valuable work the terror and scourge of the ignorant and sordid pretender, cause it to be held in the highest estimation by the honest and intelligent practitioner. The benefits which have already flowed from your unwearied labours are of the most important description. They have tended to unmask hypocrisy and arrogance, and to drag into notoriety professional misconduct and proceedings at once disgraceful to science and revolting to humanity. To your spirited and fearless denunciations we are indebted for various salutary reforms and improvements in the internal administration of several of our public Hospitals. But for the instructive and communicative pages of THE LANCET, the unparalleled blunders committed by

one of the Surgeons of St. Thomas's Hospital might have been buried in silence. By-the-bye, is it owing to the horrifying details you published, relative to the grossly ignorant and vain search after a stone (the *philosopher's*) in the bladder of *three* poor victims, that the *operator par excample* has become a fugitive from Broad-street, and fled from that City where he was born, bred, and educated, and after his matriculation was left in quiet and undisturbed possession, not only of the well-known residence, but perchance also of the mantle of his ci-devant master, the great Leviathan of modern surgery, Sir Astley Cooper? Have the cits, alarmed at such manifest proofs of defective medical discrimination, ceased to besiege his door, and left his rooms as empty as the urinary receptacles of those wretched patients were, into which, with unheard of ignorance, he introduced his useless instruments, to discover extraneous concretions which had existence only in his own perverted fancy? Is it in the hope that he may leave behind him the knowledge of these "damning facts," which you so properly exposed, and that he may begin his career, *de novo*, in a quarter where his name and exploits are alike unknown, that he has emigrated *westward*, and distinguished his "local habitation" by a handsome *whitened* outside, the emblem of innocence, "to catch the *unwary*, and make the learned smile."

Let him not, however, forget that change of place does not alter the natural disposition; for even "Qui transmutant mare terram, non animam mutant"?

Again, is it to the effects resulting from the letters which appeared *last year* in THE LANCET, relative to the "abuses of the *Cork-street Eye Infirmary*," that Mr. Alexander, the oculist of that institution, finds himself reduced to the sad and forlorn expedient of degrading his character to a level with Messrs. Brodum and the contemptible fraternity of avowed quacks, by advertising again and again in the public newspapers, and in various shapes and disguises, the case of a Lord on whom he operated for cataract, some two or three years ago? Proh Pudor! Has he, indeed, since that eventful period experienced such a lack of practice, that he must needs, "ever and anon," rest his fame upon this solitary and very common instance of success? If so, "Alas! poor Yorick!"

I remain, Mr. Editor, your constant reader, and one of your earliest subscribers and friends,

A LOOKER ON.

FOREIGN DEPARTMENT.

ANALYSIS OF FOREIGN MEDICAL JOURNALS.

Eigenthümliche Neigung zur Verwachsung des Mundes. Peculiar disposition to a Closure of the Mouth.

A boy of twelve years of age, the son of healthy parents, passed over the diseases incident to childhood without any bad consequences. In consequence of living for some time in a crowded apartment, and of being kept on bad food, the boy became out of health, and in the year 1816, a sore formed on the face just beneath the prominent part of the upper jaw, the surface of which soon acquired a greyish colour, and had in its centre a dark-coloured spot, which after a few days was followed by other spots of the same description in the same neighbourhood. Domestic remedies were tried, but without benefit, which caused the advice of a surgeon to be asked, who gave it as his opinion that the wound was the consequence of the irritation of a carious tooth, and that the black spot in the centre of the wound was an exfoliation from the alveolar process of the jaw. This surgeon undertook the management of the case, and, as it appears, was going on pretty well with the treatment; the progress toward recovery was not, however, so fast as the patient and his friends thought it should be, and therefore consulted a second, who endeavoured to combat the evil with internal as well as external remedies. During the time the patient was under the care of this person, the whole circumference of the lips ulcerated; parts of this surface healed, and as they healed so they contracted, until at last great apprehensions were entertained lest the entire aperture should be closed.

Two years the patient suffered the greatest inconvenience from the smallness of the mouth; and it was at last conceded that an operation for its enlargement was absolutely necessary. This was done, but the subsequent closure rendered a repetition of the operation necessary, as the sequel shows.

In the year 1819, the opening of the mouth was so contracted that it had a completely circular appearance, and so small was it that with difficulty could one introduce the point of a little finger into it. The surrounding parts were swollen and hardened, of a dull red colour, and the blood vessels wandering over the sur-

ace gave it a very curious appearance. In the middle of the upper lip was a chink or opening of an arched form, which reached even to the nose and had caused a drawing down as well as a partial drawing together of the nostrils. On the lower lip were some small ulcers, from which a disagreeable discharge proceeded, and gave the patient great pain. The cheeks had a very unhealthy and scorbutic appearance. The operations of chewing and swallowing were not much impaired, but the patient could only take food when divided into very small pieces, and was obliged to suck all fluids through a reed. The parotid glands were much swollen, and the salivary secretions were always accumulating in the mouth or drivelling over the lower lip in a very unsightly manner. The evil did not stop here, but continued from day to day to increase, so that at last a hollow sound could be scarcely got into the mouth. What now remained to be done, was once more to try the operation, and to give such tonic medicines as might improve the general health of the patient.

A director was first introduced and the mouth enlarged on each side by a bistoury, to rather more than its natural size, so that the boy could take food readily. The wound was prevented from cicatrizing at the angles, by interposing between its edges such dressings as were proper to keep up for some time a slight discharge of matter, and gradually removed, so as to cause the wound to heal at the natural size of the mouth. Three months after the operation was thus performed, the mouth was of the natural size, and the boy found himself well in all other respects. All flattered themselves that the boy's sufferings were over, and that he would have nothing more to apprehend; this hope, however, proved fallacious, and a disposition to another contraction appeared, and the contraction itself closed so rapidly, that in a short time the orifice was again so small as only to admit of a probe being put into the mouth.

An operation becoming again necessary, the cheeks were divided to the proper size of the mouth, the bleeding was suppressed in the usual way, and only one bandage used. Between the edges of the wound at the angles, rolls of charpie were introduced, previously steeped in alcohol, one end of which on each side was turned inside the mouth, and placed against the cheek, whilst the other end was disposed of in a similar manner externally; over this was laid a piece of paper lead, and the whole was secured with adhesive straps. The middle of the mouth was left free for the necessary supply of food, which, in order to avoid any mischief by mastication, was always prepared, by being before divided into very small pieces. In order to assist the cicatrization, the wound was daily washed with a decoction of oak bark and alcohol. The discharge was of a good character, and the edges began to cicatrize, but notwithstanding every care taken to prevent further contraction, on the tenth day after the operation, the lips began again to contract. The surface of the wound which remained was sprinkled with China root powder, and this appeared to have for some time a good effect, but in spite of all appliances, the lips continued to contract, so that at last the orifice was no larger than a common pin.

In this state the patient was left by Dr. Bondi, who communicated this case to the Journal from which we have taken it. A most perplexing and vexatious case it certainly is, but had it come under our care, we should not have contented ourselves with simply dividing the parts, but should have cut out a piece from each angle of the mouth.—*Graefe and Walther's Journal fur Chirurgie und Augenkielkunde.*

Case of Rupture of the Heart.

A heart was shown to the Academy of Medicine, by M. Ferrus, on the surface of which were several scorbutic spots, and a rent or rupture of about an inch in length on the left ventricle, near the apex. In the part where the rupture was situated, the substance of the heart appeared very much changed, and it was evident that the ruptnre was produced from behind forwards. A short time before his death, the patient fractured three ribs on each side, since which time he had experienced a sense of heat and uneasiness in the chest.

Orris Root: Caution as to its use.

Orris root is frequently used by females and others, in large quantities, as a scent, and it has lately happened, that very serious consequences were produced by this practice. Dr. Aumont lately read to the Royal Academy of Medicine of France a case in which two young girls became paralytic and insensible, from having put a considerable quantity of orris root into their hair on going to bed. When they awoke in the morning, they were seized with violent head-ache and giddiness, with pain and heat in the throat, similar to what is produced by cantharides, and

the younger of the two was completely paralytic on the right side for more than five hours.

Temperature of the Earth.

M. Orago communicated to the Institute of France the results of a great many experiments which he had tried to ascertain the temperature of the earth at different depths from the surface; according to which it appears, the temperature increases in the proportion of one degree to every hundred feet in depth.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Case of Paralysis of the upper Extremity, succeeding Concussion of the Brain.

George Harris, a sailor, 27 years of age, of short stature and florid complexion, was admitted into the Hospital on 27th of July, under the care of Mr. Key, with complete paralysis of the right arm. He gave the following history of this affection:—

About two years and a half since, whilst on a voyage at sea, by some accident he fell from the main-top-yard upon the deck, the consequence of which was, such severe injury to the brain that he was picked up in an insensible state, which continued three weeks. He was slung in a hammock, and, as is usual in such situations, received but little attention from his messmates. Upon the return of sensation, he says, that he found his right arm lying behind him, completely deprived of sensation, and it is probable the limb had been in this situation from the time of the accident to the period in which consciousness returned.

With the arm in this unnatural situation, the head of the humerus may have pressed upon the axillary nerves, and as we know that long continued pressure upon nerves will entirely destroy their powers, it is probable the paralysed state of the limb arose from this cause, and not from the injury done to the brain. The arm, at the time of admission, was completely deprived of the power of motion, and there was but a faint degree of sensibility on the inner side of the upper arm; the pulse in this arm was equal in volume to the opposite radial pulse. The muscles of the paralysed arm were much shrunk; the muscles about the shoulder joint also much wasted, and consequently the outline of the scapula, acromion, and clavicle, more marked and prominent than natural. The iris of the right eye was permanently contracted. The patient stated his general health to be good, but he acknowledged that he had indulged freely in grog. He complained much of the arm being to him an useless incumbrance, and came into the Hospital with the express intention of having it removed. He was a patient in the London Hospital, under the care of Mr. Headington, and a few months since was a patient in Guy's Hospital, from both which places he was dismissed as incurable. Blisters, setons, and other means were had recourse to, but failed in producing the slightest benefit.

During his present sojournment in the Hospital, a period of about ten weeks, he has been put under the influence of *hospital air*, the continued action of which *powerful* remedy has been duly kept up. This is a mode of negative practice occasionally adopted here, with no small share of benefit to the patients, a saving of medicine, and certainly a saving of time to the surgeons, which is of no small consequence, when we consider that their attendance is *gratuitous*. Mr. Key, at length, determined on removing the arm at the shoulder joint, which operation was performed on Tuesday, October 11.

Operation.

The patient was seated upon a low chair; the subclavian artery was compressed from above the clavicle by means of a key; with a sabre pointed amputating knife the operator commenced by making an incision downwards, beginning at the top of the shoulder, which was carried down on the inner edge of the deltoides, and terminated in a line with the insertion of that muscle; the second incision was made by cutting from the top of the shoulder about two inches and a half from the commencement of the first incision, and carrying it also downwards; as both the incisions were slightly elliptical they met at their lower extremities. The part thus intersected, (which consisted principally of the deltoid muscle,) was dissected upwards, and the capsular ligament exposed. The arm was now slightly rotated outwards, which brought the bicepetal groove nearly in front of the operator; into this groove the point of the knife was placed and thus was easily passed into the joint; the tendon of the biceps, and fore part of the capsular ligament, were divided, and also the tendons of those muscles immediately connected

with the joints; the knife was then carried behind the head of the bone, the remaining portion of capsule divided, and the incision continued directly downward; thus dividing, by one rapid stroke, the vessels in the axilla. There was very little hæmorrhage; the axillary artery was immediately secured with three branches of considerable size, instead of the usual method of paring the cartilage from the glenoid cavity; that process was sawed off by means of a metacarpal saw; the flap, which was single and formed of the deltoid, was carefully laid down and dressed with adhesive plaster. The stump has been dressed and is looking well; up to the present time (Oct. 17) the patient is free from any unfavourable symptom.

Case of Stricture of the Œsophagus.

J. Lee, ætat. 61, was admitted into Lazarus's Ward, Sept. 7th, under the care of Mr. Key, complaining of great difficulty in deglutition. The patient is much emaciated, of pale, sallow complexion, with a countenance deeply wrinkled, and remarkably expressive of organic disease. He describes himself to be a man of temperate habits, and his occupation is that of a spectacle-glass grinder. He has been labouring under his present complaint about six months, and it has gradually become worse. At the present period the difficulty and pain of swallowing either liquids or solids is very great, and the seat of constriction appears to be about that part where the œsophagus enters the thorax. A bougie has been several times passed down the œsophagus into the stomach, but there was no constriction felt at any particular part, the instrument passing down without any impediment. After taking the small quantities of food, which he is enabled with great difficulty to swallow, he complains of fulness of the stomach, and is much troubled with flatus and eructations, but has no fixed pain in the stomach. Mr. Key supposes there is some disease about the cardia.

The treatment of this case has been simply the exhibition of the following mixture at the suggestion of Sir A. Cooper.

Solution of oxymuriate of mercury, 1 *drachm*,
Sulphuric æther, 1 *drachm*;

to be taken in a little water three times a day.

Phagedenic Ulcer of the Lip.

M. A. Horsman came into the Hospital July 7, as a patient of Mr. B. Cooper, with a foul ulcer on the left side of the upper lip. The patient, a girl of spare habit and about 16 years of age, stated that the sore commenced with a small pimple, about six weeks previous to her admission. At the time of admission it was larger than a shilling, and of considerable depth; the bottom of the sore was principally covered with a foul yellowish slough, but in some parts the slough was black. The edges of the ulcer were raised, indurated, and somewhat everted, and there was a circle of dark-coloured inflammation around the base of the ulcer.

The patient was seen by Sir A. Cooper, who considered the sore to be venereal; we presume, a *primary* venereal ulcer. It certainly had much the appearance of a chancre, and it might have arisen from the direct application of venereal matter. It should be observed, that the glands under the chin were much enlarged and very painful. The patient was directed to take

Calomel, 2 *grains*,
Opium, *half a grain*, night and morning.
Oxymuriate of mercury, 1-16*th grain*,
Decoction of sarsaparilla, 4 *ounces*;

to be taken three times a day.

Black wash and solution of opium, to the ulcer.

26th. The mouth had become slightly affected, and the calomel and opium were only taken at night; the ulcer was less sloughy.

August 2d. The calomel and opium were entirely omitted, and 15 grains of soda, with infusion of gentian, were ordered to be taken three times a day, and one grain of opium at bed-time. The ulcer at this time evinced no disposition to heal.

11th. It was now apparent that the ulceration was extending; the patient complaining of much pain, and the circle of inflammation had considerably extended. Leeches were applied two days before, and ordered to be repeated, and as the appearance of the sore improved under the use of the mercury, it was again prescribed, and she continued to take calomel and opium for about ten days; but it did not this time affect the mouth as in the first instance.

23d. No improvement in the aspect of the ulcer, and she has now a scaly eruption principally upon the legs. She was directed

Blue pill, 3 *grains*,
Extract of bark, 5 *grains*;

to be taken twice a day, and to apply a carrot poultice to the part.

30th. Calomel and opium again directed and port wine poultice.

Sept. 16th. The mouth had become slightly affected; the slough had separated from the ulcer, and granulations of a healthy kind were now to be seen. The *yellow wash* had been applied for several days, and the port wine poultice omitted. The local applications were continued to the sore, and 5 grains of blue pill directed to be taken at bed-time, in lieu of the calomel. Since this period, the ulcer has gone on rapidly healing, and is at this time, Sept. 28th, nearly well.

The only operation performed last week, was the removal of a diseased breast by Mr. Key.

ST. THOMAS'S HOSPITAL.

Fatal Injury to the Head.

J. Boyd, a stout athletic man, of florid complexion, and about 45 years of age, was brought into the Hospital on Wednesday, Oct. 12th, about two o'clock in the afternoon. It was stated that he had been employed, on a very high tree, in beating walnuts, during which his foot slipped, and he fell with his head jammed between two stems of the tree. When discovered, and relieved from this situation, he was found to be perfectly senseless, but there was no sickness. A surgeon was sent for, who, we believe, bled the poor man. The accident occurred about nine o'clock in the forenoon, at a distance of eight or nine miles from London.

When admitted into the Hospital, there was found to be a contused wound on the back part of the right temporal muscle, of about an inch and a half in length; the bone, however, was not denuded. The patient had stertorous breathing, with frothing at the mouth; the pupils were dilated, and not obedient to the stimulus of light; there was an entire loss of voluntary motion, and almost a total absence of sensibility, of which, however, there were slight signs on the right side of the body. The pulse was slow, labouring, and slightly irregular, the average number of beats 68; the surface, but more especially the extremities, were cold, and there was no vomiting.

It was determined upon to wait until some degree of re-action had taken place. The patient was put to bed, and bottles of hot water put to his feet. At four p. m., that is about two hours after admission, slight re-action was set up; there was increased warmth of surface, but in other respects the patient continued the same. The temporal artery was opened, the head shaved, and cold lotion applied; little or no effect was produced by the bleeding; the breathing shortly after became interrupted, and the patient died at five o'clock.

Post-mortem Examination.

There was considerable effusion of blood under the fascia covering the temporal muscle, but there was no external appearance of fracture in any part of the bone; upon sawing through the calvarium and raising the dura-mater, there was found to be great effusion of blood over the whole extent of the right hemisphere of the brain, amounting to not less than three ounces, which was of a dark gelatinous character; over the left hemisphere was also effusion, but merely a smearing of blood; there was an oblique laceration of the dura-mater of about a quarter of an inch in extent, at the part nearly correspondent with the posterior inferior angle of the right parietal bone; on careful examination, the spheno spinal artery was found to be torn through; there was extensive laceration of the under part of the right middle lobe of the brain, and there was also a point of laceration at a corresponding part of the left side of the brain; there was a fracture at the base of the cranium, which, commencing in the squamous portion of the temporal bone, took its course through the body of the sphenoid bone, and through the sella turcica to the left foramen ovale of the sphenoid bone. The fracture did not extend through the petrous portion of the temporal bone on either side, and to this circumstance may be attributed the absence of an occurrence usually attendant upon fracture at the base of the skull, namely, effusion of blood from the meati auditorii externi. Mr. Tyrrell * removed the eyes, and in the vitreous humour of each eye was great effusion of blood, a circumstance of rather an unusual nature, but which may be supposed to have arisen from a rupture of the central artery of each retina.

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* Mr. Tyrrell is the only surgeon at St. Thomas's Hospital who enters the dead-house for the purpose of examining bodies. Mr. Travers was missing a few weeks since when at the Hospital; every ward was searched in vain, and considerable alarm was excited, when, at length, Mr. T. was discovered to have strolled, *par accident*, into the dead-house!

ST. BARTHOLOMEW'S HOSPITAL.

Case of Compound Fracture.

James Thompson, ætat. 72, was brought into Rahere's Ward on the evening of the 6th of September, about 10 o'clock, with a bad compound fracture of the leg, caused by his falling down stairs when inebriated. When brought in, he was still in a state of intoxication. There was a large wound about four inches long, situated on the inner side of the lower third of the tibia. It was directly in the course of the fracture, which was oblique; both bones were broken, and the oblique fractured upper end of the tibia protruded considerably. The fracture in the tibia was not less than three inches, and a very considerable portion of the bone was laid bare and exposed. From the situation of the wound, there was every reason to believe, that the posterior tibial artery was wounded, especially as its pulsations could not be felt. Mr. Birch, the house surgeon, sent for Mr. Vincent, who, when he arrived, examined the limb, and seeing the state the patient was in, determined not to amputate. His reasons for coming to such determination, we afterwards understood, were the following:—the great age of the man, and his being drunk; that it was an axiom of his never to operate when a man was in such a state; that when a patient was drunk, you could not ask his consent; that it would be adding another shock to the one he had already received, &c., and that he would therefore wait till the morning. Extension was used, and the fractured portions of bone brought in as near apposition as possible. The leg was placed in a fracture box, on oil silk, with pads on either side of the leg, and at the foot; a piece of dry lint was placed to the wound, and thus he was left for the night.

7th. Slept soundly all night, probably from inebriation. This morning his pulse is 85, very full, tongue white, passed his stools when asleep; breathing rather difficult. Mr. Vincent had the fracture box undone, took the lint from the wound, and then had it placed as before.* Nothing said about amputation.

Evening. Felt very hot and feverish; the pulse 120, full and hard; tongue dry and parched; complains of considerable pain in the leg. Ordered the saline medicine, with 20 drops of liquor antim. tart. every six hours.

8th. Says, when asked, that he slept very well; but he appears rather childish. The pulse 120, and sometimes intermitting; tongue covered with a dark brown fur, and parched; his bowels are relaxed, and he labours under considerable difficulty of breathing. The difficulty of breathing continued to increase; his pulse became very irregular, and on Wednesday afternoon he gradually sunk.

The reasons which deterred Mr. Vincent in this case from immediate amputation do not appear to us to be of sufficient force to justify such determination. First, the age of the patient, 72, was sufficient alone to cause the limb to be removed, as it was not to be supposed that a man, arrived at such a time of life, would be able to undergo the irritation and exhaustion consequent to the reparation of so severe an injury. Next, the argument of his being intoxicated, appears so ridiculous, that we wonder Mr. Vincent could adduce such in support of non-amputation. We should form but a sorry opinion of any surgeon who would refuse to trephine in a case of depression, until the patient should be in a fit state to give his consent. Lastly, as to adding another shock to the one already received, it is as false in fact as erroneous in theory. It is on the receipt of the injury that the patient is in the best state to undergo the operation. A great authority (Baron Larrey) says, the first twenty-four hours is the only time nature remains tranquil; the patient is, as it were, stunned; his sensibility is deadened, and his mind is prepared to meet the worst; and lastly, he is changing his shattered and mangled limb, which would cause great irritation in the act of reparation, for a simple incised wound, healed, most probably, by the first intention. We shall conclude in the words of a celebrated writer, "The consideration relative to amputation, is of the more importance, because it most

* It is evident, from a perusal of this case, Mr. Vincent does not agree with Mr. Mudge of Plymouth, in the propriety of endeavouring to render a compound fracture as nearly as possible in the same circumstances as the simple, by closing very carefully the external wound, and bringing its edges together, by sticking plaster, and then varnishing it, so that the broken bones may be covered almost as effectually as by the integuments. We can only say that our friend Mr. Abernethy approves of it highly, and says that "if the escape of the coagulated blood can thus be prevented, the fracture may unite by the adhesive process, instead of by granulation."

frequently requires immediate determination; every minute of delay is, in many instances, to the patient's disadvantage, and a very short space of time indeed frequently makes all the difference between probable safety and fatality. Here, therefore, the whole exertion of a man's judgment is required, that he may neither rashly and unnecessarily deprive his patient of a limb, nor through a false tenderness and timidity suffer him to perish, by endeavouring to preserve such limb."—*Pott on Fractures*, p. 76.

There have been two operations at this Hospital during the week; one in a case of popliteal aneurism, John Egen, æt. 29, a porter. Mr. Lawrence tied the artery about an inch below the profunda femoris; the man is doing very well. The other was a case of stone in a child, aged four years, operated on by Mr. Earle; the stone was about the size of a large bean, and of the lithic acid formation; the child is doing well. It is rather curious that a month or two since the child was left almost in a state of idiotcy from an attack of epilepsy. It may be questioned whether or not the irritation arising from the stone could have any share in bringing on the attack.

ST. GEORGE'S HOSPITAL.

Case of Compound Dislocation of the Ancle Joint.

Wm. Smyth, a remarkably fine muscular man, was brought into the Hospital, on Thursday, Sept. 15th, late in the evening, with compound dislocation of the left ancle joint. He had fallen from a ladder, a height of about 10 feet. On examination, there was found to be an extensive lacerated wound of the integuments on the inner ancle, extending, in an oblique direction, from the anterior part of the ancle as far back as the tendo achilles; and through this wound the tibia, malleous internus, with some shattered portions of the malleous externus protruded. The tendons of the tibialis anticus, extensor longus digitorum, and peronens brevis muscles protruded with the tibia; being separated from their muscular fibres above; and the tendo achilles was likewise extensively exposed. Mr. Rose, the surgeon for the week, was sent for, and on his arrival, found such extensive laceration of the soft parts, and such a shattered state of the bones at the ancle, together with the rupture of the capsular ligament, that he immediately decided to amputate. The patient was carried to the operating theatre, where Mr. Rose performed the operation below the knee in the usual manner. The patient took 30 drops of laudanum previous to the operation, which was repeated three hours after.

16th. He has passed a good night. There has been no hæmorrhage from the stump; but it is of a high temperature, and the whole thigh appears inflamed, and the integument has an erysipelatous blush; pulse full and soft; tongue slightly furred; bowels open; Mr. R. ordered a bladder of ice to be applied to the stump; and to take 30 drops of tincture of opium with 20 drops of antimonial wine, at bed-time.

17th. Passed an indifferent night; there is great throbbing in the stump; there was a slight hæmorrhage from some arterial branch yesterday, which suddenly stopped spontaneously; in consequence of the increased action of the pulse, he was immediately bled to ʒxij; this had very little effect over the pulse; the hæmorrhage returned in the evening, but was immediately stopped; he was again bled to ʒx.; this last bleeding had a decided effect upon the pulse, which is now 80 and soft; tongue more furred than yesterday; bowels costive; ordered a dose of castor oil in peppermint water; and to continue the ice to the stump.

19th. The patient has much difficulty of breathing, and he spits up a deal of phlegm; says that there is less throbbing in the stump; it has been dressed to-day with simple cerate spread on lint, and two strips of adhesive plaster to prevent retraction of the integuments, and a poultice over all. Ordered the saline draught three times a day.

20th. The patient has had diarrhœa, which has been removed by the use of the chalk mixture, combined with opium, and aromatic confection; notwithstanding the stump looks healthy, and is fast healing up; he is now ordered wine and full diet.

Retention of Urine.

John Calver, a middle aged man, of full plethoric habit, was admitted into the Hospital August 23d, under the care of Mr. Rose. On his admission he seemed in great agony, not having passed any water from the day before, he likewise complained of violent pain in the hypogastrium; he was ordered the hot bath directly, and whilst in the bath the bladder emptied itself.

The patient says that he has been subject to difficulty of making water these twenty years, and at times to suppression; had his bladder punctured a year and half ago for the same complaint.

27th. Has passed water since his ad-

mission till early this morning, since which he cannot void it, is in violent pain. Mr. R. used a small silver catheter, which became entangled in a contracted portion of the urethra, and could not be got into the bladder; he was then ordered the warm bath, and to take a scruple of Dover's powder every five hours till the spasms were relieved.

28th. Has passed no water since yesterday, after being in the warm bath and bled to ʒxx., which made him faint; at present, one o'clock p. m., he is in violent pain, straining constantly, and cannot pass any water. Mr. R. tried to pass a very small elastic gum catheter, and afterwards a bougie; none of these succeeding, Mr. R. punctured the bladder above the pubes with a small trocar. There came through the canula about one or one and a half pints of water, mixed with a puriform matter, which gave the urine a violet tinge. The trocar was removed, and an elastic gum catheter introduced through the opening, which was secured, and allowed to remain in the bladder; ordered to take ʒss. of castor oil directly, and to be repeated every half hour till the bowels are well open.

Evening. The medicine has operated; feels quite comfortable; the water comes away through the canula; pulse full and strong; repeat the bleeding to ʒxiv.

29th. Passed a good night; the water comes away to-day by the urethra; passes a small quantity every hour, which is loaded with lithic acid.

31st. Improving; the water comes away in part through the opening in the wound, and through the urethra; not having passed any water for two or three hours, the patient complained of pain. Mr. Rose, therefore, removed the catheter, which was thickly crusted with triple phosphate; upon removing the catheter, the urine came freely through the puncture; the catheter was replaced.

Sept. 4th. The catheter is now withdrawn a few hours daily, and replaced in case of a relapse of the spasms in the urethra: ordered to have low diet.

7th. There is great tenderness in the hypogastrium; the urine is discharged partially by the urethra and the puncture in the bladder. In consequence of the catheter being left out longer than usual yesterday, Mr. R. experienced some difficulty in replacing it; bowels confined; ordered some house physic, and to take ten grains of Dover's powder at bed-time.

10th. An effusion of urine has taken place in the cellular membrane, towards the right side of the puncture, where an abscess appears to be forming; the whole surface of the abdomen is very tender; the patient cannot bear the slightest pressure; there comes away a considerable quantity of mucus with the urine through the opening in the bladder.

The abscess discharges its contents partially through the opening in the bladder; the catheter is removed daily for a few hours, and then replaced again; the urine, for the most part, comes away through the urethra. Tongue furred, bowels relaxed. Ordered the following directly:

Rhubarb in powder, 10 *grains*,
Tartrate of soda, 1 *drachm*,
Spirits of nutmeg, *half a drachm*,
Water, 11 *drachms*,

for a draught, to be taken immediately; and three table spoonfuls of the following mixture to be taken four times a day:

Chalk mixture, 7 *ounces and a half*,
Tincture of cinnamon, *half an ounce*,
Tincture of opium, *half a drachm*.

17th. The abscess has been opened to-day, half way between the umbilicus and the superior spinous process of the ilium, which discharged a considerable quantity of very fœtid pus; the bowels are always relaxed. Repeat the chalk mixture, and let him take 10 grains of Dover's powder at night.

19th. A great deal easier since the abscess has been opened; very little pain in the hypogastrium; the abscess discharges freely; and the patient makes water, without any pain, through the urethra; the puncture in the bladder nearly healed up; the patient is very much purged. Repeat the mixture, and a powder to be taken with each dose of the medicine, and a scruple of the powder at bed-time.

20th. The diarrhœa has increased; the patient is purged 20 times in the course of the night; in other respects he feels comfortable; the abscess discharges very little, and the puncture in the bladder is quite healed; makes water freely. Ordered to continue the mixture, and to take one grain and a half of opium every four hours.

23d. The bowels always relaxed. Mr. R. ordered him to take 12 grains of Dover's powder every four hours with each dose of the mixture, with the addition of 10 grains of the confection of opium, and one drachm of the tincture of kino, to each dose.

24th. Much the same; was purged 10 times last night. He was ordered a dose of castor oil, to be taken directly, and to continue the mixture.

A case of Axillary Aneurism.

John Latham, aged 37, (a labourer at Astley's,) of a spare, delicate habit, was admitted into the Hospital August 25th, under the care of Sir E. Home, with a large tumour in the axilla, occupying the whole space from within an inch of the sternal extremity of the clavicle to the insertion of the pectoralis major in the arm; the clavicle is greatly elevated by the tumour; the pulsation is likewise very distinct in it, which is stopped by making pressure on the subclavian artery above the clavicle, where it passes over the first rib; the pulsation is also very distinct along the course of the brachial artery, as far as its bifurcation, but indistinct at the wrist. The patient stated, that in the year 1813, he was discharged from the 84th regiment, when in India, for palpitation of the heart, after having served five years; says his health has been pretty good ever since, excepting that he has had occasional hæmoptysis, but never so profuse as to excite any alarm. About three months ago he was affected with pains in his right arm and shoulder, which were most acute at the elbow joint; he perceived no tumour at that time, thought it might be rheumatism, and that by applying heat to the limb the pains would subside. About two months previous to his admission he accidentally observed a tumour in the axilla, which, at that time, was about the size of a walnut; he says, that it has attained its present size within the last three weeks (which is that of a man's fists); no operation was proposed, in consequence of the tumour being complicated with the organic affection of the heart. The patient was ordered to keep quiet in bed, to be bled occasionally, and to keep the tumour constantly wet with a lotion.

29th. Was bled in three different vessels; the blood drawn in the two first was cupped and buffed, that in the third not; pulse softer and more distinct at the wrist; feels easier.

30th. Has had a good night; pulse soft, but frequent; bowels costive; has taken some Epsom salts, which have not operated; ordered to have some house physic.

Sept. 3d. Pulse 100, soft and quick; the tumour extends more over the clavicle; tongue clean; bowels open. He was ordered to have rice and milk diet.

4th. Pulse more full and slow. Repeat the bleeding to ʒviij.

5th. States that in the night he was suddenly awoke with a darting pain which shot through his chest, and gave him the idea that some person had struck him; this was momentary; he says that he had a similar attack once before. The blood that was drawn yesterday was highly inflamed. Sir E. Home directs the bleeding to be repeated; he thinks that the tumour is less, and that the pulsation is less distinct. Pulse 120, and wiry. Repeat the bleeding to ʒviij., and let him have ten grains of Dover's powder at night and an opening draught in the morning.

6th. Pulse 110, and soft; the blood taken yesterday cupped and buffed; slept well; had no return of the pain in the chest; tongue clean; bowels open. Repeat the powder at bed-time.

8th. Passed a very indifferent night; was troubled with frightful dreams, which kept him awake the greater part of the night; pulse very sharp and wiry, and the patient seems very feverish. V. S. ad ʒviij.

9th. Complains of violent spasms in the chest, with pains shooting from the scrobicalus cordis towards the tumour (these are increased by inspiration); pulse quick and sharp; tongue clean; bowels regular. V. S. ad ʒvj.

10th. Passed a restless night; still complains of pain in the chest; tongue slightly furred; the bowels have not been opened since yesterday; the pulse always continues sharp and wiry; he was ordered to be bled to ʒx. and to have five grains of calomel at night and a dose of house physic in the morning.

12th. Has slept but little these two last nights; the patient seems greatly exhausted from want of sleep; he now complains of violent pain in the region of the heart, with the expression of much anxiety; the tumour is greatly enlarged; there is also an increased temperature of the part. Pulse 100, and soft; tongue slightly furred; bowels open. He was ordered a draught three times a day, composed of the following: *infusion of roses, one ounce and a half; tincture of digitalis, eight minims; sulphate of magnesia, half a drachm, mix; and to take twelve grains of Dover's powder at bed time.*

14th. The pain remains fixed in the left side of the chest; the bowels are rather relaxed; pulse, 100, and soft; tongue clean. The same medicine as yesterday, with the addition of two drops of the tincture of digitalis to each draught, and 15 grains of Dover's powder at night.

Operations.

Amputation of the fore-arm by Mr. Rose; amputation of the leg by Mr. Brodie.